Planning for the Disadvantaged

Science Curriculum Materials for the Disadvantaged Children

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The Secure and Insecure Children

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Educo-Ecology : A Concept for Understanding Educational Milieu

SATYA PRAKASH SINGH

Educational Development of the Scheduled Castes (*Document*)

M.S. SWAMINATHAN

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VOLUME EIGHT NUMBER ONE MAY 1982

JOURNAL OF INDIAN EDUCATION

NCERT

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The *Journal of Indian Education* is a bimonthly periodical published by the National Council of Educational Research and Training, New Delhi.

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational views, and to promote the development and improvement of educational practice. The contents include articles by distinguished educationists, challenging discussions, critical analyses of educational problems, book reviews and other features

Manuscripts sent in for publication should be *exclusive* to the *Journal of Indian Education* They should be in duplicate, typed double-spaced and on one side of the sheet only, addressed to the General Editor, *Journal of Indian Education*, Journals Cell, NIE Campus, Sri Aurobindo Marg, New Delhi 110016. Contributions accepted are paid for on publication.

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices/ policy decisions Specific examples where this impact is apparent may be given.

GENERAL EDITOR

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GENERAL EDITOR : R. P. Singh ASSISTANT EDITOR : J. P. Sharma
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Planning for the Disadvantaged

INDIAN society offers little to commend itself. A highly stratified social order over-ridden with prejudices against castes, tribes and women promises next to nothing in terms of future. We are competing against those who besides being developed are positively getting more socially cohesive. If the Americans have become more tolerant towards the blacks and the yellows and have legislated against segregation, the British society despite its usual quota of riots is on the point of developing a social perspective in which the 'coloured' play the same role as the 'whites'. Voluntary societies have been working towards the goal of social amity and peace. In other words, in both these countries more voluntary work has been undertaken than the official or the government. Somehow in the Indian society people are not so agreeably disposed and do not take so kindly to voluntary work They prefer a government fiat as a solution to an attitudinal problem than persuasion or discussion. This we regard is a greater source of our troubles than any. It would appear that we have failed to develop an infrastructure that sustains itself by social cohesion It looks as though our preference has been for an isolationist viewpoint or an individualist philosophy. What is most unfortunate is that even a scheduled caste thinks that he could thrive only if he is designated as one. Perhaps it would have been more logical had inequality been economy-based. Poverty cuts across all barriers except the barriers of hunger and shelter. A poor is poor and the poverty of a scheduled caste is as humiliating and degrading as the poverty of a non-scheduled caste If a poor needs food he also needs education Therefore, why must we plan on caste-lines and not on social-economic status line ? This is one question which we have failed to answer convincingly. We want a debate—a real, heated debate on evolving guidelines for planning in education. We want to know why the disadvantaged shuns the school and not why a scheduled caste/scheduled tribe does not go to school. Several researches have borne us out. The disadvantaged does not go to school because he is poor. He does not remain in the system because of his

poverty. Education as such does not hold out to him any promise that the poor shall not remain poor. In fact, researches point out that the poor think education would help him only to remain more poor for a long time Education is perceived as a negative help This then is the point that the planners must note Education should be proposed to be seen as a help in overcoming the barriers of hunger and want. So long this does not happen we shall continue to have hazy goals and rigmaroles as the answer for our educational failures.

May 1982 GENERAL EDITOR

Science Curriculum Materials for the Disadvantaged Children

R.M. KALRA

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MOST SCIENCE teachers are aware that some of our disadvantaged children (slums, rural, hilly and tribal children) are consistently disinterested in school and this lack of interest often results in failure of our school system.[1,2] Because the science curriculum in our schools as it now exists presents a world which is alien to these students, this disinterest and resulting failure should not come as a surprise. A student's interest is aroused only when he perceives something of value in the school or sees a practical application of the knowledge to be gained.

The science curricula has not really approached the problem of teaching science to our disadvantaged children. It is unlikely that any single curriculum in science will meet the needs of all children. While these newer curricula may go a long way toward fulfilling the needs of many students, it appears that something further is needed to meet the needs of our disadvantaged children.

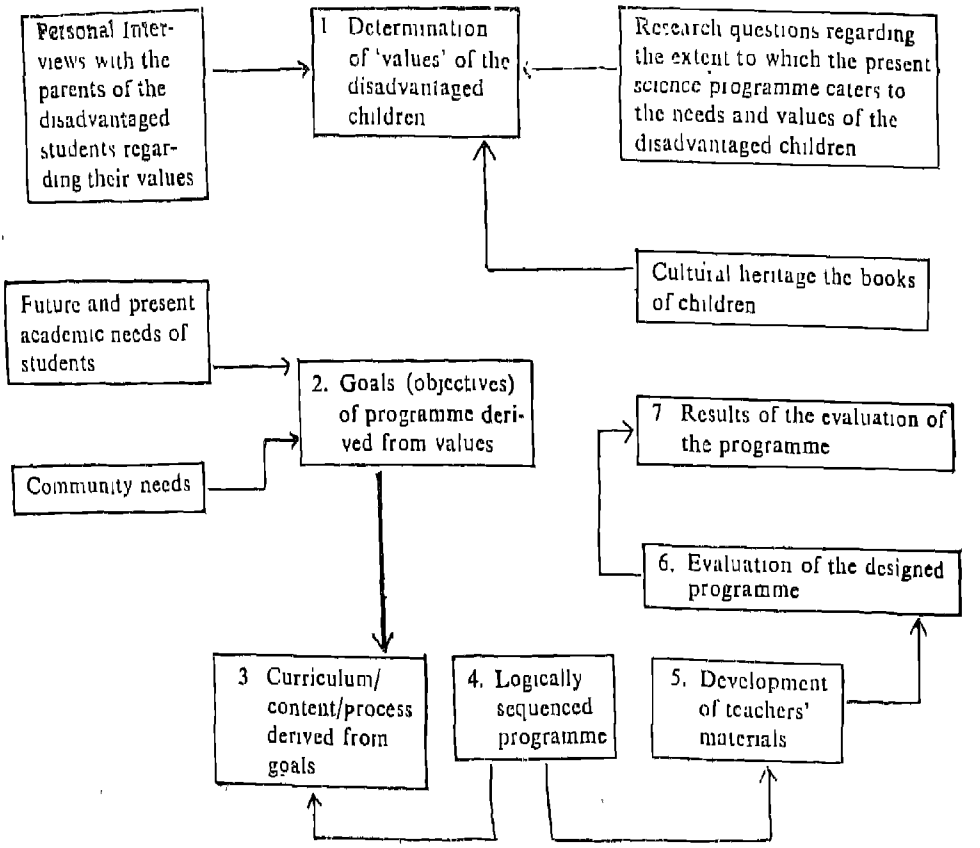
Development of a Model

What is needed is the development of a model of the process used to develop science curriculum materials which are responsive to the needs of our disadvantanged children. Thus in this article a model of the process for the science curriculum development for the disadvantaged children (primary and secondary level students) is proposed.

* The views expressed are that of the author and does not reflect the views of the organization where he is employed.

[1] L.R.N. Srivastava, *Tribal education*, Working Paper, NCERT, p. 18, 1967

[2] R.M. Kalra, New directions for imparting meaningful science education to native Indian students, Hilroy Fellowship project, Ottawa, Canadian Teachers' Federation 1970-71, pp. 18-61



SCHEMATIC REPRESENTATION OF THE MODEL

The above process is comprised of the following steps .

Step I: Determination of Values of the Disadvantaged Children

Most science teachers are aware that our disadvantaged children are *consistently disinterested in the school system* and the lack of interest often results in failure in the school subjects. This repeated failure in the school has led to discouragement and the resultant number of drop-outs. The Table on pp. 5-6 indicates the high attrition rate of wastage and failure in the blocks of the Saora of Orissa.

Analysis of the Table shows that the rate of grade repetition and of drop-outs is extremely high. In the opinion of the author, the above failure is partly due to the structure of the present system of education, a structure which is based on the assumption that various sub-cultures such as the hilly tribal children will understand its value to him, his family and his community. If he does not reach this level, of course, he is just a 'dumb child'. As a result of this assumption which implied that our urban culture is the best and consequently very little credit is given to their rural and tribal cultural heritage in the present system of education.

TABLE

Enrolment and Wastage		*Names of the Blocks of the Saora Area*				
		Gumma	*Rayagada*	*Nuagada*	*Gunupur*	*Total*
Enrolment in	M	299	91	206	190	786
Class I	F	133	44	87	44	308
	T	432	135	293	234	1,094
Enrolment in	M	207	42	73	53	376
Class II	F	72	5	3	8	88
	T	279	49	76	62	464
Wastage between	M	92	49	133	136	410
Class I and Class II		(30.77)	(53.85)	(64.56)	(71.58)	(52.16)
	F	61	39	84	36	220
		(45.86)	(88.64)	(96.55)	(81.82)	(71.43)
	T	153	88	217	172	630
		(35.42)	(65.19)	(74.06)	(73.50)	(57.59)
Enrolment in	M	127	35	43	28	233
Class III	F	20	—	2	1	23
	T	17	35	45	29	256
Wastage between	M	80	7	30	26	143
Class II and Class III		(38.65)	(16.67)	(41.10)	(48.15)	(38.03)
	F	52	5	1	7	65
		(72.22)	(100.00)	(33.33)	(87.50)	(73.86)
	T	132	12	31	33	208
		(47.31)	(25 53)	(40.79)	(53.23)	(44.83)
Number of Those	M	38	8	17	8	71
Who Passed Class II	F	8	—	—	—	8
	T	46	8	17	8	79
Wastage between	M	89	27	26	20	162
Those Who were		(70.08)	(77.14)	(60.47)	(71.43)	(69.53)
Enrolled in Class II	F	12	—	2	1	15
and Those Who		(60.00)	—	(100.0)	(100.0)	(65.22)
Passed Class III	T	101	27	28	21	177
Total Wastage	M	261	83	189	182	715
between Those		(87.29)	(91.21)	(91.75)	(95 79)	(90.97)
Enrolled in Class I	F	125	44	87	44	300
and Those Who		(93.98)	(100.0)	(100 0)	(100 0)	(97.43)
Passed Class III	T	386	127	276	226	10.15
		(89.35)	(94.07)	(94.20)	(96.58)	(92.78)

Enrolment and Wastage		*Name of the Block of Puri District*		*Total*
		Gop	*Khandpara*	
Enrolment in Class I	M	397	374	771
	F	315	150	465
	T	712	524	1,236
Enrolment in Class II	M	363	184	547
	F	251	60	311
	T	614	244	858
Wastage between Class I and Class II	M	34	190	224
		(8.56)	(50.80)	(29.05)
	F	64	90	154
		(20.31)	(60.00)	(33 12)
	T	98	280	378
		(13.76)	(53 43)	(30.12)
Enrolment in Class III	M	298	169	467
	F	198	38	236
	T	496	207	703
Wastage between Class II and Class III	M	65	15	80
		(17.91)	(8 15)	(14.62)
	F	53	22	75
		(21.12)	(36.67)	(24.11)
	T	118	37	155
		(19.22)	(15.16)	(18.06)
Number of Those Who Passed Class III	M	208	96	304
	F	124	23	147
	T	332	119	451
Wastage between Those Who were Enrolled in Class III and Those Who Passed Class III	M	90	73	163
		(30.20)	(43.20)	(34.90)
	F	74	15	89
		(37 37)	(39.47)	(37.81)
	T	164	88	252
		(33 06)	(42.51)	(35.85)
Total Wastage between Those Who Enrolled in Class I and Those Who Passed Class III	M	189	278	467
		(46 61)	(74.33)	(60.57)
	F	199	127	318
		(60.63)	(84 67)	(68.39)
	T	380	405	785
		(53.37)	(77.29)	(63.51)

Source Srivastava, Lal and Lal, *Identification of educational problems of the Soara of Orissa*, July 1971, pp. 81-82

Manipulation of the physical world is the very strength that our system of education has to offer up to a certain extent in the urban set-up and we say, "If only we could teach these uneducated and rural children to think logically, that is, scientifically, to bring them into the twentieth century and get them to abandon their obviously unsuccessful customs, they would be better equipped to handle the problems and live more productive lives." The trouble with this type of thinking, however, is that there is enough truth in it to validate the demands for more technological education; but also enough narrowness and oversimplification to trap the unwary into believing that indeed technology is a complete system of thought and, therefore, the key to heaven's gate.

There is a great danger in science as a singular value system for, if the weakness of various ethnic cultures is their resistance to scientific thinking, then there has been equal stubbornness on the part of western scientific culture to be over-committed to technology. The historical record of all great civilizations tells us that cultural idealism and technology must exist side by side. Great engineering masterpieces in all ethnic cultures give testimony that science and technology are many thousands of years old and that what the westerners can the 'industrial revolution' only means an unprecedented acceleration and exceedingly strong emphasis on this aspect of human activity. The fact is that five or six thousand years ago the rise of the great civilizations was not brought about by technology alone, but by radically new social inventions. In spite of the westerner's affluence, his overwhelming commitment to industrial affluence appears to be at the expense of his health, mental balance, and with the advent of the hydrogen bomb, his very survival.

In this age of modern technology and academic knowledge these rural students are conscious of the phenomenal advancement of urban culture, but at the same time they perceive that their own culture has contributed little to the present syndrome of technology and feel it is too little for them to make a significant contribution to the society in which they must live. Nowhere is ruthless effacement of a people's pride in their own achievements more evident than in current education practice Here is a people whose culture was solidly science-based long before modern technology came into existence, yet this fact is ignored in the present teaching curriculum. Have their achievements in applied science, agriculture, construction and mathematical manipulations been so useless as to be given no consideration in the present curriculum ? The writer is not consciously digressing from his purpose here, but only seeking to suggest new directions for imparting meaningful education to our disadvantaged children. The introduction of newer curriculum in science education at the secondary level has not really approached the problem of science teaching of the disadvantaged students.

It is worthwhile to point out that some sincere and honest efforts are being made to revitalize the science curriculum by the NCERT with reference to rural environment.

Methods used in determining values of the disadvantaged students . In order to develop the proposed programme in science education for the students, answers to the following research questions were sought :

1. To what extent does the present course content in science relate to everyday needs of the disadvantaged people ?
2. Is the present course content in science related to the cultural values and heritage of the people ?

3. To what extent does the present course content in science cater to the future needs of the disadvantaged children ?

To accomplish this, an evaluation questionnaire may be administered to these students in the rural and tribal areas schools Responses to the evaluation questionnaire by the students may reveal the significant need of a science programme which caters to the needs of the local community and is also based on the cultural values of the disadvantaged students. In order to validate the responses made by the students some personal interviews with the students participating in the above activity may be conducted. Discussions with the educated persons of the local community may also be held with reference to the needs of the disadvantaged children.

Step 2: Goals to Objectives of the Programme

A philosophy of teaching science consists of aims and objectives of teaching in general and of science teaching in particular. In order to impart meaningful science education to the disadvantaged students, a background in their 'cultural heritage' and 'values' in general are derived from the 'values' what our disadvantaged students accept. However, other factors (such as community needs, availability of the materials, library and lab tools and knowledge of the basic concepts in the discipline of science) are also to be taken into consideration for the development of the proposed science programme.

Step 3 : Curriculum Content Process Derived from Goals

The course content in the proposed science programme for the disadvantaged students is thus determined by Steps 1 and 2. The author's research may indicate whether a new system of science education is needed or not.

Step 4 : Organization of the Proposed Programme

Listed below are some of the guiding principles which may be followed in the development of the proposed programme :

1 The curriculum should be organized into units each of which shall be related to some significant aspect of the environment.
2. The unit should be essentially a major problem of everyday life to which science may contribute an intelligent basis for human adjustment.
3. Each unit should include only a few principles of generalizations of science.
4. The organization, in part at least, should be in the form of problems or projects to ensure education in problem-solving which is the nature of science.
5 The distribution of time and emphasis to various units be determined by the total functional, social value of the units, its 'teachability' and 'learnability'. The teacher's and pupils' interest in the unit, the local significance of the unit, and its value to other units of the course.
6. The laboratory work should be included as an integral part of the problem-solving and shall, therefore, have the characteristics of experience and should de-emphasize illustrative or conformatory work.
7. The organization of the course should be such that it will lead to

the attainment of immediate and ultimate objectives.

Step 5 : Development of Teachers' Materials

Teachers' materials may be developed and distributed to selected teachers.

Steps 6 and 7 : Evaluation and its Results

An evaluation tool may be developed for the students and the teachers regarding the relative strengths and weaknesses of the proposed science programme, its operation in existing facilities and recommendations for the change. Also, a random selection of teachers and students may be made for in-depth interviews. Additions or subtractions may be made in the proposed programme according to the responses made by the students and the teachers implementing the programme in part or whole.

The above process may be applicable in other school subjects such as social studies, English and mathematics for our disadvantaged students.

Conclusion

It is hoped that the above strategies concerning curriculum development will serve to encourage all concerned to think, organize and strive further together toward helping the disadvantaged students in India to think, discover and contribute a scientific knowledge and a better India. □

Educo-Ecology : A Concept for Understanding Educational Milieu

SATYA PRAKASH SINGH

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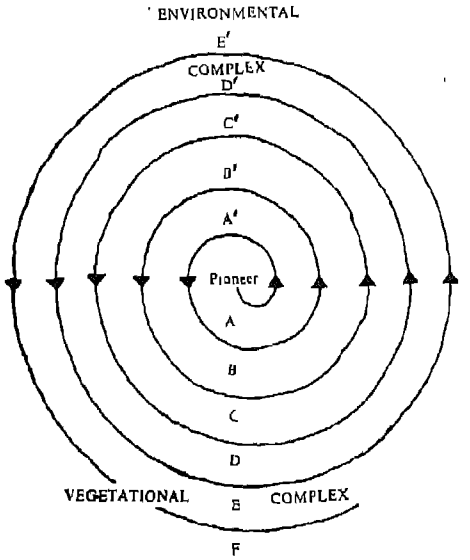
ECOLOGY is the study of organisms in reciprocal relationship with the environment The word 'ecology' is derived from Greek word *oikos* meaning the house or dwelling place, and *logos* meaning the discourse or study. The organism is governed by a number of factors and so is the case of environment, i.e. both subjects of study are controlled by multiple factors. The cause-and-effect relationship of these factors forms the basis of an ecological study. Interrelationship of such factors takes a comprehensive view, i.e. a sort of holistic attitude is required while understanding an organism or a group of organisms in relation to the environment.

Depending upon the organisms that are studied, the ecology is specifically termed as plant-ecology, animal-ecology, human-ecology, etc. An ecological study is subdivided into autecology and synecology. Autecology comprises the study of interrelationship between individual species in a population and its environment. Synecology deals with a community, i.e. an assemblage of a large number of species growing together. Ecological study of a community of plant or animal shows systematic evolutionary stages. This is known as community dynamics. Initially a bare area is invaded by immigrants where a lag period exists for adaptation. This follows colonization, i.e a stage of organization into communities which further develops through changes occurring in the environmental complex and organic complex. Here cause-effect changes set in giving rise to an important dynamic phenomenon known as succession. Process of succession may be represented[1] as in Fig. 1.

* This article is the preamble of a new concept on educational administration and sociology of education, showing a novel approach towards resolving the problem of administration and the role of educational institutions.

[1]Drawn from *Indian manual of plant ecology* by R Misra and G.S. Puri, The English Book Depot, Dehradun, p. 26, 1954



A-E Seral Communities F Climax Communities

Fig. 1

Succession is the natural process by which same locality becomes successively colonized by different groups or communities. If the normal course of succession is not disturbed the process goes on continuously in new and progressive equilibria, otherwise a deflected succession begins. The dynamic procession of developing community goes on until a relatively stable community takes its position. The stabilization of the succession gives rise to a climax community. A climax in real sense is not possible as the community and environment both are ever changing. Depending upon the number of true climatic climax, available in a region, the community is known as monoclimax or polyclimax.

Educo-ecology

When we think of the factors influencing an educational institution both from within and without, a dynamic phenomenon of cause-effect relationship, described as above, flash on our mind. The role of an educational institution, i.e. school in relation to society has been a subject of study. The concept of educational sociology as it is called, gives only one side of the whole mechanism. A school is taken as a social formal agency of education but it is not all. In order to have a comprehensive understanding of the complex of educational activity of an institution, a study similar to that of phytoecology or zooecology or human-ecology is necessary. By its scope and nature, such study may be taken as an important branch of education. Analogically, the term 'educo-ecology' may be defined as holistic study of educational impact of an institution in relation to the community in which it is situated. This branch of education shall help better understanding of the problems of education, institutional planning, educational supervision, and administration, development of curriculum etc.

An educational institution, e.g. school or college or university or any such formal or informal agency of education, is simultaneously controlled by a number of factors. The elements of an educational institution, viz. teachers, students, administrators and supervisors, etc. together constitute an internal force. The components themselves are governed by the external forces, viz. social, political, economic, cultural, etc. of the community. Thus, the impact of an institution is the resultant of the intra-influence of the constituent forces, coupled with the external forces. Interrelationship of these forces, in reference to the school and society, and their educational impact on a particular community, should form the subject of the study of educo-ecology.

Schools have been widely recognized as a social agency of education. It is also accepted as a community within the realm of a society. As a living community, it grows and develops certain norms and ideals. Based on the *esprit de corps* of the

constituents, the educo-energy (Ee) of an institution assumes power to influence the community. The impact of an educational institution on a community is in direct proportion to the degree to which coherence among the components exists. The amount of sharing of the ideals by its elements and the community is reflected in generation of the educo-energy of an institution. The educational strength of an institution in terms of its impact, should be the subject of the study of educo-ecology

A conceptual model of educo-complex, giving rise to the idea of educo-ecology, may be diagrammatically represented as in Fig. 2 An educational institution, viz. school is situated in a community. A particular community is charged with cultural, social, political, economic forces prevailing upon it. Multiplex of these external factors constitute the social environmental force of school. For the purpose of understanding the concept, let us call it community force. Constituents of a school, viz. students, teachers and administrators jointly form the institutional force. Since the constituents of a school are also in close contact with the community, they are apt to be influenced by the community force Out of interaction of the components of a particular school an intrinsic institutional force is generated. The community and institutional forces jointly become the nuclear source of educo-energy of an educational institution. Educo-energy, thus liberated, is responsible for the educational impact of an institution on the community. An analytical study of the educo-complex should fall under the scope of educo-ecology.

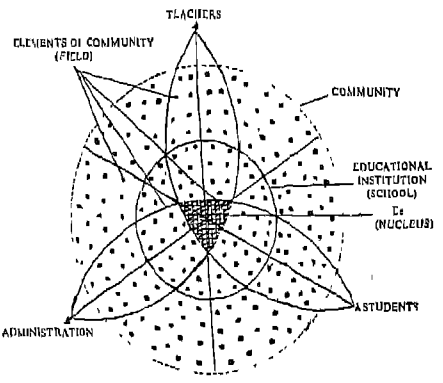


Fig. 2

Educo-Energy

Educo-energy (Ee) of an institution radiates power which causes transformation of a community. In other words, the intellectual development of a society is directly related to the power of the educational institution in terms of its educo-energy. The causes of slow or stagnant development of a society may be diagnosed through the study of educo-ecology of that community Utility of an educational institution should be measured in reference to its educational impact on the community in which it is situated. For such a study educo-ecology would be of much help. A standard scale of measurement of educo-energy of an institution may be developed Diagrammatic representation of the progressive educational influence of an institution upon a commu-

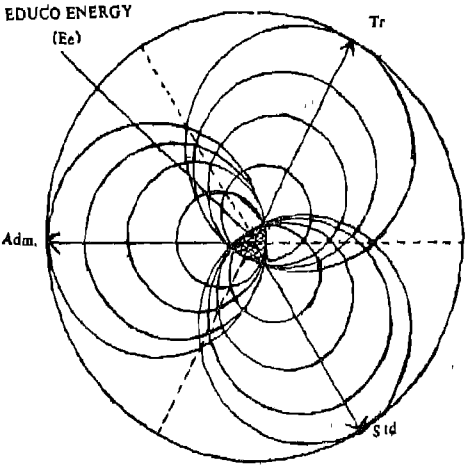


Fig. 3

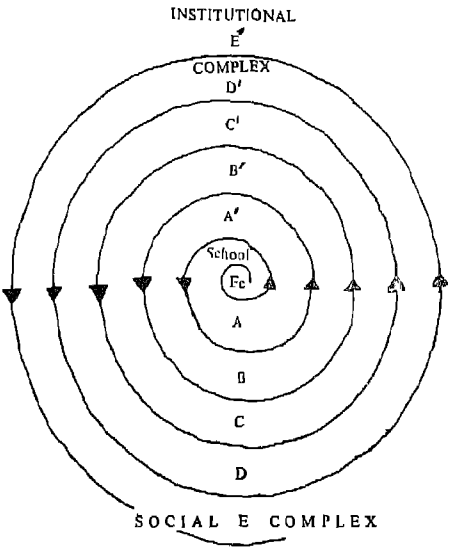
nity through its educo-energy (Ee) is given in Fig 3

Educo-Succession

While developing the concept of dynamic equilibrium in education,[2] the author has developed an idea of succession in education. 'Biophysical' complex of an institution comprises biotic factors as well as physical factors. The components of biotic factors are teachers, students, and the administration of the institution. The physical constituents are buildings, furniture, books, finance, etc. Biophysical elements of an educational institution are responsible for the institutional environment. The community environment or, it may be also termed as social environment, continuously act upon the institutional milieu through its community force The two environments are in progressive dynamic equilibrium under their driving force. The interaction of the two environments influences the tone of the institution and its educational impact upon the community This rhythmic phenomenon of institutional influence in relation to the community may be termed as educo-succession

The mechanism of educo-succession may be explained on the similar pattern of vegetational succession as discussed in the beginning of this article. In the process of colonization, a bare area is initially invaded by an immigrant being the pioneer. The developmental stages of adaptation to organization into communities pass through changes in the environmental complex and organic complex Owing to a process of cause-effect relationship a dynamic and progressive evolution of community relationship brings about changes, leading to stabilization and finally a climax. The process of educo-succession takes place in reference to the progressive development of an educational institution in a community and its educational impact upon it.

An institution, established in a community or an area, owes certain responsibilities to that community. The power of discharging the responsibilities of an institution depends upon its intrinsic energy This effective educo-energy emerges out of interaction of the institutional and community-forces, i e. the factors influencing them. Impact of an institution in the area or the community, begins from the moment it starts functioning there as a pioneer immigrant in the area. The pioneer institution follows the course of development under the influence of the community forces, which are squarely influenced by the progressing institutional forces Thus, a process of educo-succession set in Maintenance of a sort of dynamic equilibrium in the community is inevitable to enable the institution to discharge the community or



(A-E Growth of Institutional Communities)

Fig. 4

[2]S. Prakash Singh, Quest for dynamic equilibrium in education. *Journal of Indian Education*, New Delhi, NCERT, III, 4, pp. 65-57, Nov. 1977

social responsibilities The process of educo-succession is diagrammatically represented in Fig. 4. Gradual emergence of educo-energy (Ec) of an institution in relation to the two complexes is shown in the spiral This phenomenon continues till a hypothetical climax is attained.

Since the process of education is progressive and dynamic the concept of educo-climax would be a hypothetical stage When another institution is later on established in a community, where impact of the pioneer institution has already set in a process of educo-succession, a new additional institutional force begins to influence the educo-complex of the area The two educo-forces may be in harmony or act antagonistically. This would be again a subject of study under educo-ecology

Conclusion

Ecology is a branch of biological science wherein study of an organism or a group of organisms are made in relation to their external environment Development of the organism or the community is affected by the environmental factors. The environment is also influenced by the organic complex. A study similar to it may also be made. An institution may be conceived of as an organic complex, influencing the community and being influenced by it. Such a state of cause-effect relationship may be taken under a study, known as *educo-ecology*. The extent to which an educational institution is able to transform a society or community depends upon its *educo-energy* (Ec), which emerges out of interaction of the institutional and the community forces. This concept of educo-ecology would be helpful in understanding the operative effect of an institution and its educational milieu. □

Student Perception of Leadership Charateristics

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Leadership was among the first dimensions to be investigated by social psychologists, and still it remains the interest of many investigators Despite repeated researches for decades in the field, no fixed pattern of traits of leadership has emerged as yet. It may be due to the situational characteristics of leadership. This does not mean that there is no relationship whatsoever between leadership in one situation and another, or in one group and another. Studies have clearly shown that some individuals appear to emerge as leaders in a number of different situations, others rarely or never do so, and still others—probably the majority—play the role of a leader only on certain occasions and in certain groups.

Leadership can be defined as an individual's ability to take initiative in a social situation and organize an action in so doing to evoke cooperation The leader is generally the person in the group who has the greatest influence on the activities and beliefs of the members. He is the one who initiates action, makes decisions and gives orders to the members as to what they should do. *Initiating* structure and *consideration* constitute two major dimensions of leadership. The Ohio State leadership studies, conducted in 1945, made a mention of these two dimensions of leadership A leader high in the first dimension—initiating structure—organizes and defines the relationship between himself and the members of his group. He tends to define the role which he expects each member of the group to assume and endeavours to establish well-defined patterns of organization, channels of communication and ways of getting the job done This dimension of leadership characteristic is also known as task orientation. The second dimension is noted as consideration. It is associated with behaviour indicative of friendship, mutual trust, respect, and warmth in the relations between the leader and his group members. This dimension of leadership characteristic is known as person orientation.

Thus leadership is defined and leadership

characteristics are perceived in many ways by very many people in different contexts. But leadership quality is very much desired in any person. More commonly held views on the purposes of higher education is to train talented young for leadership in all fields. University Education Commission explains the same and Kothari Commission says that one of the prime objectives of higher education is "to provide right kind of leadership in all walks of life". So universities and colleges which are expected to train leaders of tomorrow have a special responsibility in this matter. But how do students of 1980s perceive leadership characteristics ? Students of today are tomorrow's leaders in various fields and to have a projection of future leaders a study among the emerging leaders becomes a needed one. This initiated the investigator to conduct the present study among the postgraduate students of Madurai Kamaraj University to find out their perception of leadership characteristics.

Objectives

1. To find out the trend in the perception of leadership characteristics by the postgraduate students of Madurai Kamaraj University.
2. To find out the differences, if any, between male and female students in their perception of leadership characteristics.

Sample

Random sampling procedure was used to select 120 postgraduate students (60 male and 60 female) from the total population of 600 in Madurai Kamaraj University. The sample was 20 per cent of the population (male 10 and female 10 per cent).

Tools Used

Leadership characteristics worksheet published by the University Associates, Lajollo, California, was used. Of the 12 items given in the tool items a, c, e, g, i, and k measured the initiating structure dimension of leadership and items b, d, f, h, j, and l measured the consideration dimension of the leadership.

Methodology

The subjects were asked to rank all the 12 characteristics of leadership given in the worksheet, according to their order of preference. The data were analysed by computing the mean score of each item to prepare the rank list To find out the significant difference, if any, between male and female group 't' test was used. The results are shown in the Table on p. 17.

Findings

The following characteristics of leadership were given the first *four* ranks by students :

1. Is friendly and sociable
2. Listens and tries to understand others
3. Provides opportunities for group members to aid in decision-making activities
4. Has new and interesting ideas—is creative.

The *last* rank was given to the characteristic—follows strictly accepted rules and procedures. It is evident from the Table that there was not much difference in the ranks given by male and female students. Both the groups were uniform in giving first two ranks and the last rank. Their ranking

TABLE

Item	Leadership Characteristics	Rank		Male		Female		t-value
		MALE	FEMALE	MEAN	SD	MEAN	SD	
a	Maintain an orderly meeting most of the time	10	11	3.97	2.96	3.58	2.86	0 7358
b	Is friendly and sociable	1	1	6.89	3 73	7.43	3.52	0.8181
c	Has new and interesting ideas—is creative	3	4	5.58	3.98	5.37	3.18	0.3230
d	Listens and tries to understand others	2	2	6.39	3.61	7 17	3.22	1.2096
e	Is firm and decisive, not hesitant	6	5	4 69	3.83	5 29	3.92	0.8571
f	Admits errors openly and easily	5	9	4.71	3 42	4 37	3.34	0.5573
g	Makes sure everyone understands what is expected	7	6	4.66	3.59	5 25	3.24	0.9516
h	Provides opportunities for group members to aid in decision-making activities	4	3	5.41	3.35	5.41	3.08	0. 009
i	Uses praise frequently and negative criticism sparingly	9	8	4.38	4 02	4 42	4.18	0.0714
j	Is willing to compromise	11	10	3.96	2 95	3 88	2.87	0 1509
k	Follows strictly accepted rules and procedures	12	12	3 61	2 98	3.30	2 91	0.5849
l	Never expresses anger or dissatisfaction with others	8	7	4.47	3 8	4.88	3.62	0 6119

patterns were statistically tested and the Table shows that there was no significant difference between male and female students in their perception of leadership characteristics.

Discussion

From the findings of the study it was clear that out of the first four ranks given by students three ranks came under consideration dimensions of leadership and only one was under initiation structure. So it can be inferred that students give prime importance to the consideration or person-oriented dimension of leadership. This may be because the young students have not involved themselves in the process of leadership seriously and this makes them not to give the due importance to the task-oriented dimension of leadership. Pillai (1978) in her study had stated that teachers give importance to initiating structure than for consideration dimension of leadership. So students differ from teachers in their perception of leadership characteristics. So it can be inferred that educated women are on par with men in leadership characteristics. This may be due to the equal educational opportunities women have with men.

Conclusion

From the findings and discussion of this study we can arrive at a conclusion that students are for consideration dimension of leadership and there is no significant difference between male and female students in their perception of leadership characteristics. To make an effective leader, consideration dimension of leadership should be balanced with initiating structure. So a balanced form of these two major dimensions of leadership should be developed among our students.

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The Secure and Insecure Children

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IT HAS BEEN found by psychologists that a sense of security at home is an essential prerequisite for the healthy development of a child's personality. A child must feel accepted, loved and appreciated in his home environment. His physical and mental faculties can grow normally only if he has a feeling of belongingness to his family. Home environment exerts profound influence on the development of personality of a child. A child feels insecure if he finds himself ignored, unwanted or rejected by his parents. An insecure child does not usually receive adequate appreciation, love and affection from his parents. He, thus, feels rejected, and develops a feeling of alienation and isolation.

On account of the feeling of insecurity a child may become either extremely withdrawn or extremely aggressive. He lacks self-confidence and develops the attitude of negativism, unwillingness and inhibition. Due to insecurity, there is conflict, anxiety and tension in his mind. In case he is unable to endure the stress of insecurity for a long period, he may develop symptoms of maladaptation and neuroticism.

Security, as Maslow (1952) defined, is one of the most important determinants of mental health, almost to the point of being synonymous with it. Insecure persons suffer from feeling of rejection, isolation, anxiety, tension, strain, conflict, depression, phobia, maladjustment, inhibition, etc. For insecure persons life has no purpose. They lack adequate objective perception of the world which environs them. Secure persons, on the other hand, have feelings of safety, being accepted, belongingness, friendliness, happiness, kindness and emotional stability, etc. Secure persons have positive, healthy and optimistic outlook on life. For them, life has a goal which they strive to achieve. The world appears to them a living reality.

It has been found by some psychologists that feeling of insecurity is deeply rooted in certain persons due to various factors which are discussed in the following paragraphs.

Heredity Factors

It is generally observed that insecure persons are too much worried about their health. Even though their health may not be poor, they feel as if they have poor health. It means they are constitutionally predisposed towards anxiety. They cannot adapt themselves to the changes in their daily life. Hence, it confirms the view that insecure mental health is usually due to a longstanding and constitutional factor. The insecure children have a tendency for remaining aloof from others, and thus they develop a sense of loneliness. They feel lonely because they are unable to make friends with others. They are lonely even in the midst of children of their own age. In due course of time they gradually get withdrawn from society which environs them.

The physically handicapped children suffer from a feeling of insecurity. On account of their physical deformity they have to face many adjustment problems. They are unable to take part in the activities of daily life like other normal children. They develop a feeling of inferiority due to their physical handicaps. They feel insecure and frustrated on account of their physical inadequacies.

Environmental Factors

The environment plays an important role in the development of personality and mental health of an individual. The term 'environment' is very wide as it includes home, school, social and cultural environments. Out of these various types of environments the importance of the home and the school environment are discussed below.

Home environment: A happy family is said to be a sound matrix for secure mental health. Lundberg and others have rightly said :

> The family is the most persistent factor in a child's life Friends, teachers and other associates are comparatively temporary influences.

Love, understanding, appreciation are positive forces which can help in the development of secure mental health. The feeling of security or insecurity depends upon the psychological set-up of a family comprising of parent-child relationship, parent's mutual relationship and sibling relationship. In healthy and peaceful home environment the children feel secure. Children who are brought up in an unhealthy home environment feel threatened, their feeling of belongingness get shattered because they do not get proper affection from their parents, which is the most important source of security.

Over-domination of parents on their children may produce feelings of anxiety and insecurity in them, and they may even feel rejected. It is found that dominating parental control is detrimental to mental security only when it is conveyed through harsh methods. To quote Maslow and Bela (1951) :

> The effect on the child of parental domination depends on whether it is conveyed through cruel and harsh or relatively considerate methods. If it is relatively considerate the effect may be a good child.

It has been found that insecure persons develop unfavourable attitudes towards their parents, in comparison to secure persons. The social distance widens between insecure children and their parents.

When a child is accepted, loved and praised by his parents, particularly by his mother, he feels secure. Freud observes :

> I have found that those persons who consider themselves preferred or favoured by their mothers manifest in life that confidence in themselves, and that unshakable optimism which often seems heroic and not infrequently compel actual success.

The healthy child-mother relationship creates self-confidence and security in a child. It is generally believed that the child-mother relationship is more important in the development of secure personality of a child. But it has been found that the role of the father is more important for a child to feel secure. Wasley, *et al.* also arrived at the same inference. They write :

> The most marked parental differences are seen on the maladjustment ratings and the non-readiness of explanation (thwarting) rating. At face value, these findings suggest the hypothesis that the adjustment of father is more critical in determining personality problem in children than is the adjustment of mother.

In summary they conclude that :

> The many important associations between father and child behaviour led to the conclusion that future research and perhaps the therapeutic practice should give more consideration to the role of the father in child development.

It is generally believed that economic anxiety may be related to insecurity in some individuals, but Neustatter (1938) after studying the effect of poor financial conditions in the production of neuroses concluded :

> Even very bad social conditions of children unaffected psychologically, provided the psychological home situation was good. There is a statistically significant relationship between the presence of a worrying disposition in the parents and the presence of anxiety and a tendency to worry in the children, irrespective of class

Skottowe (1957) writes :

> Mental stresses springing from socio-economic changes seem in general to be of little import for mental health, compared with disposition and intrafamilial relationship.

School environment : Uncongenial school atmosphere is also responsible for making children mentally insecure. Unsympathetic and harsh attitudes of a teacher create anxiety, tension and phobia in the mind of a child. Too much strict discipline in the school also disturbs a child. A child feels frustrated, rejected and insecure. A child may develop a sense of insecurity due to defective methods of teaching and system of examination. If he does not fare well in the examinations, he fails to come up to the expectations of his parents and he feels frustrated. Prolonged and repeated frustrations may produce feeling of insecurity in a child.

According to Taylor (1938) students may develop neurotic symptoms due to anxiety which is produced by the university in which they study. They may find the academic pressure on them too demanding, and they experience problems of adjustment to their university environment.

It is evident, then, that several factors play their part in producing asense of secu-

rity in an individual. Quite often the ambitions in an individual are too high and he is unable to approximate them due to his personal inadequacies and uncongenial environmental factors. Thus feeling of insecurity gets deeply entrenched in his personality.

Remedial Measures

Adequate feeling of security is essential for the growth and development of a balanced personality. Hence, favourable environment should be created in the home as well as in the school. Parents should be affectionate towards their children so that they feel secure and wanted. They should be sympathetic towards children so that they do not feel rejected. Children should be neither over-protected nor under-protected. Home environment should be such that children have a feeling of belongingness in the family. Family members should have sympathetic attitude towards physically deformed children. In order to make the handicapped children feel self-sufficient and secure, proper education should be imparted to them.

The atmosphere of a school should be congenial for the intellectual growth of students. Teachers should appreciate the intellectual abilities in their students and give them appropriate incentives for the growth of their intellectual faculty. They should foster a feeling in their students that they are acceptable to the academic community by virtue of their intellectual excellence.

It may be concluded, then, that feelings of their security or insecurity may be produced in individuals due to a very wide variety of causes. Psychologists must, therefore, probe deeply into the personality structure of individuals, and try to analyse the causes of their feelings of security and insecurity and suggest remedial measures. Moveover, favourable environment should be created both in the home and the school for a balanced, integrated, and secure personality development.

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□

The Western Shadow over Indian Education

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INSTRUMENTALITY of education to mould or to control people's character and thereby their socio-cultural and politico-economic activities has been a well-known practice Changes in educational outlook parallel changes which a nation undergoes during the course of its history. "For these reasons education is political It is volatile. It strongly reflects the often conflicting and wide-ranging preferences of a society which it also helps to sustain "[1] Leaders of men of all hues ranging from Hitler to Lenin, Mao and Mahatma Gandhi have set great store by it. It is no wonder that when Independence was achieved, "Nehru and leaders in several other countries insisted that the entire system of education must be revolutionized. But this is exactly what did not happen. The principal reform of the system as it was inherited from colonial times remain largely unaccomplished even today."[2] The colonial era ended by leaving vast masses of population untouched by any formal education and by following up these deeds by over-seeing so that the situation perpetuates even after reins of government have been handed over in a way that the stranglehold of the mercantile and technological imperialism remains in tact. Undoubtedly, we are groaning under its weight, but being now politically independent, we can blame none but ourselves for the circumstances.

Our own history should have opened our eyes as to how the invading colonizers from time to time used the levers of education to create classes—the rulers, the ruled and the intermediaries—the tactical weapons being linguistic elitism, quality differential, professional selectivism, instillation of socio-cultural inferiority and rootlessness The Aryans with Vedic traditions and Turko-

[1]Maurice Kogan *The politics of educational change*, Fontana, p. 20

[2]Gunnar Myrdal. *The challenge of world poverty*, Penguin, p, 179

Afghans with Islamic cover perpetuated their own brand of imperialism, the only saving grace being that they, by and large, became part and parcel of this country's social milieu, barring a few under the Pan-Islamism. In case of the third major incursion, i.e. the European wave, the imperialism was practised from outside with the least accountability and involvement. This is what has been still besetting us with logistics nonpareil. In several ways we are greater slaves than what we were before 1947. Let us look at our educational plans and programmes in this context

The Beginning

The contacts with the West had two distinct types—the subtropical and the temperate of the Portuguese and the Western European. The former was more feudal in character than mercantile. It was imbued with proselytizing Jesuit zeal and vaunt The other was Anglo-French design, anchored on mercantilism and empire-building tenacity, putsch and intrigues. After the defeat of the French, the Englishmen ruled the roost. The Portuguese approach was short-sighted, out of tune with times and not fit for dealing with Indians who had a very well developed culture and social system of their own. Hence, the Portuguese influence was confined to a few small, isolated and relatively backward pockets.

The Englishmen, however, had to deal with much more vast and complex society, clever but ill-organized people and had to adopt much more clever and insidious ways —surfacing a kind of 'enlightened' imperialism as compared to crude Iberianism of the Portuguese. It is true that European mercantilism and colonialism used Christian missionaries as their supporting arms and sometimes even moved in the wake of their activities. It so happend, in certain parts of India which were predominantly tribal, but otherwise it had a role to play which was peculiar to this country by way of undermining the indigenous class culture but fostering a new elitist class instead It did not openly offend the sensibilities of the local people, but exploited the predisposing socio-cultural factors and nourished the class character in our society, manipulating both the content and the process education to its best advantage It destabilized the old upper class and set up a fresh loyalist one with old legs and new face It is indeed a very interesting subject of study.

Educational Leverage

Like any foreign ruler, the British stood in dire need of a local populace based lower and intermediate level bureaucracy. This required an educational plan of a type in which competence in English for intermediate level civil servants replacing Persian of the Mughal days was necessary. The vernaculars sufficed for lower level employees. Drawing an analogy from the introduction of Persian by the Mughals, Charles Grant pleaded as early as in 1797 for "gratuitous instructions in reading and writing of English" and thought that "the Hindus would in time become teachers of English themselves and the employment of our languages in public business for every political reasons remaining in full force, would in course of another generation, make it very general throughout the country."[3] Our historians make much of the orientalist vs. Anglicist controversy with a sense of appreciation for the former forgetting that neither had Indian interests in mind; it was merely a difference in perspective in which missionaries of those days differed from the

[3] *Selection for educational records*, Part I, Publication Division, Government of India, p. 83

administrators, but with ultimate objective of European domination alike. The local elites of Bengal joined hands with Anglicist, for proficiency in English assured them entry to the intermediate rung of bureaucracy whose main function was to help the British masters as interpretors, translators, purveyers of information and local level administrators—a go-between role It is, therefore, no wonder that Raja Ram Mohan Roy opposed the setting up of the Sanskrit College by praising English learning and ridiculing Sanskrit language and asserting that "in the same manner the Sanskrit system of education would be the best calculated to keep this country in darkness, if such had been the policy of the British Legislative"[4] The Hindu elites who were at a disadvantage in entering higher echelon of Mughal bureaucracy saw a chance in learning English, so much so that Prinsep (1834) was unnerved by such a move and with a view to restoring balance wanted the learning of English to be boosted in the Madarsahs through a scheme of scholarships[5]. It was clearly a question of building up a new class of bureaucratic elites, loyal to the British Crown. It is evident from Macaulay's remarks :

> We must do our best to form a class who may be interpretors between us and the millions whom we govern—a class of persons Indian in blood and colour, but English in taste, in opinion, in morals and in intellect.[6]

He went on to decry the teaching of history, philosophy, science (physics), etc., the idea perhaps behind it being to control the cultivation of mind.[7] The seeds so sown have thrown such deep roots as it is difficult to uproot them, for they are so parasitic in nature that they get attached to all kinds of forms and nourish on them.

Continued Linguistic Imperialism

It is clear that the adoption of English as a principal subject of study and as medium of instruction was a motivated one. Mahatma Gandhi amply exposed this game.[8] When we attained Independence, everyone thought that days of English language were numbered, but the things have gone the other way. The hiatus has deepened. The British Council swung into action as never before The English Language Teaching Institutes—Central, Regional and State level—have been set up and it is for anybody to see that English-medium schools have multiplied galore—many times more than they were ever earlier. The role of English-medium missionary schools, patronage extended to them and minority privileges claimed by them as minority institutions, need to be examined closely in the context. To avoid any misunderstanding, it may be stated that these are, by and large, good schools, but with an unsavoury slant Before Independence none could venture to defend English-medium schools openly but look at what our 'nationalist' representatives in the sixties such as Dayabhai Vallabbhai Patel, R.K. Amin, etc. have to say :

> Hence the importance of English cannot be overlooked and having historically obtained the advantage of our close association with English, why should we destroy it ?... The teaching of English

[4] *ibid.*, p. 101
[5] *ibid.*, p. 103
[6] *ibid.*, p. 116
[7] *ibid.*, p. 117

[8] Mahatma Gandhi's address to Gujarat Shiksha Parishad, 1917. Reproduced in *Sachchi Siksha*, Navjiwan Press

should therefore be encouraged (Minutes of dissent to National Policy on Education, 1967).[9]

A Union Education Minister, known for his so-called breadth of views, is on record to have shown his displeasure at reducing time-budget and attention on teaching of English. Even after more than three decades of wishing for socialistic society the Government of Uttar Pradesh is contemplating to set up a public school for the gifted and even to introduce the teaching of English from Class III at the primary stage in especially selected schools in the beginning. In a learned gathering in university circles one may not easily pick up courage to present a paper in a language other than English for our intellectual circles do not often consider our own language as a vehicle of serious thought, for which there is no genuine and national basis except that we have not yet become self-dependent in our thinking.

Indubitably, English is one of the mainstays of foreign dependence for the growth of scientific intellect in our country. It is not only creating social barriers but is also crippling our intellectual effort. The former is too plain to be dwelt upon here. The latter is so subtle that we often do not realize that our originality, creativeness and technological inventiveness are being atrophied.[10] Considerable effort is wasted in learning a foreign tongue in which proficiency is hard to acquire One may recall that till the forties, even late into the fifties, not less than one-third of school tuitional time used to be devoted to learning English even in Hindi-medium rural, urban and slum area schools—a defenceless policy The post-Independence period witnessed a variety of tricks which English language colonizers played on us with the help of those Indians who stood to gain by linguistic elitism For example, 'situational teaching', a new version of the discarded 'direct method' mounted on the bandwagon of 'structural grammar', came to be propagated Never before there was such an emphasis on spoken English, 'language labs' becoming the most prestigious acquisition, although our educationists have been advising learning English mainly as a library language. There appears thus that the Macaulayan thesis holds stronger sway over Indian mind today than it did even during the heydays of the British Empire. It is being employed by the West as an 'interface' to cleverly transfer selected ideas and information to control and manipulate behaviour of the less fortunate nations. It is no surprise that the interest in using the English language 'interface technology' is not confined to Anglo-Americans, but is shared by other developed countries including Soviet Union.

Marketing Knowledge in the Field of Research and Development

This being the age of standardized and mass-manufactured information, ideas and technology, and their circulation through the info-sphere (to borrow the phrase from Toffler), signifying channelled information flow system, we always stand the risk of "brain controlling" Even when there is no such deliberate and mischievous efforts, one may not entirely escape the damage, unless

[9] Report of the Committee of Members of Parliament on Education, 1967, Ministry of Education, Government of India, p. 51

[10] *Report of education commission (1964-66)*, paras 1.51 and 1.52: Learning through a foreign medium compels the students to concentrate on cramming.. The change in the medium of instruction is justified not so much by cultural or political sentiments as on the very important academic consideration of facilitating grasp and understanding of the subject matter.

one is wary about it. A person susceptible to propaganda will receive his dose like the depressed ground to which liquids may flow automatically There is considerable evidence that our academic circles are prone to accepting foreign ideas uncritically and imitate them with alacrity. Still worse, they are not aware of the self-debasing after-effects. It is evident that ideas and inventions have social frame of reference Before they are adopted or adapted, it is necessary to try them out and evaluate. The way we have been behaving in this respect seems to suggest that we are heading towards becoming a 'captured nation'. Let us illustrate it with a few instances

As fall-out of the introduction of the study of psychology in the universities, and its consequent popularity as a new discipline, psychological testing, educational and vocational guidance and similar others of its applications also gained ground as new fads. Such a marketing of ideas and expertise led to the setting up of 'guidance bureaus' encouraged by some supportive funds from Ford Foundation in India and free training facilities abroad In the circumstances we are placed in regard to employment opportunities and educational facilities, the whole programme has turned out to be almost still-born. Nevertheless it is continuing more or less as an showpiece from which fringe benefits may accure to some good schools only. This programme was never evaluated objectively by an independent or neutral agency.

It is common knowledge that we have been struggling with the problem of universalization of elementary education and eradication of illiteracy 'a promise to keep'. The situation is worsening; the system geared to it has deteriorated, leaving people dazed and disillusioned with many past experiments ending in fiasco. As soon as some messiah descends from the lofty position of 'developed countries' with 'bright ideas' and initial 'aid', a new kind of effort gets started. The doles when compared with totals, both in men and materials of this country spent on such new projects, are not very substantial and yet we allow to be directed and administered in a manner by the foreign elements that the projects do not usually seem to be based on objective realities of our country. We ought to now realize that this 'begging cult' is not likely to take us any far. What a loss of national prestige !

Of late, the innocuous looking international organizations under UN aegis have started serving as marketing platforms for the Western developed nations Research and development, and supportive technology and goods are easily marketed with undue emphases and in improper contexts. For example, non-formal education is a nice idea in itself, but it is being sold to us in a way that many of our responsible educational leaders—academic and bureaucratic—have begun to think of it as an alternative to formal education. I have personally heard quite a number of them speak that formal system has failed and hence there is no alternative but non-formal system to achieve the goals. Similarly, we have begun to foist our hopes on 'satellite education', radio lesson and the like and have sadly started decrying or neglecting the earlier arrangements, so much so that we are likely to be neither here nor there.

The 'ideas of hope' often turn out to be ephemeral, for before there be any exposure of a failure, a new set is being marketized. One does not know how long this game can continue. As in case of mystiques, it is not uncommon in the operation of these important ideas that a new colourful vocabulary is introduced as ruse to look novel, e.g. modules/capsules of learning. How outlandish ! Our school teachers will end up

their career perhaps in familiarizing game and in the end get flabbergasted. It only demonstrates that ideas are not bad in themselves, they become so by context in which they are placed and intentions behind their operation.

The secondary and university stages of education are no less vulnerable, nay even more They are familiar hunting grounds for the freebooters with saleable ideas in education. The idea of open schools and open universities is a well sold one. These institutions are on anvil in our country, as if the existing expansion without any well laid-out effort to consolidate it, was not enough to wrestle with. Have we assessed the situation for actual need of this new measure ? For instance, there exist already correspondence courses' facilities for teacher training in spite of the fact that there is a large surplus of trained teachers, besides an over-producing facility in existing training institutions. And yet, there are Unesco recommendations for expansion of teacher education which we absorb without evaluating the nature of our own needs. "The open air university, a British concept", observes R.K. Singh, "provides another example of thoughtless imitation."[11]

Similarly, there has been much talk and little to none action in the field of examination reform. The University Grants Commission has come out with a number of reports from time to time since Independence. The Inter-University Board has already set up a cell which is quite prolific in producing sets of questions in different subjects with "imported format" but without bothering about the quality of their contents. Any foreign-looking thing has a market here which shows how gullible we are.

It is well-known that pupil assessment should be directed towards improvement of learning and that punitive and irreversible classificatory role of public examinations should be abandoned, if not immediately, then in a phased manner. We have had foreign advisers coming to this country and our own experts making repeated consultancy trip abroad. But with what results ? In principle they have one thing to say and for action another. The foreign experts have assured with their competence in statistical operations and management models that evils of public examinations can be controlled. They have succeeded in selling some hardware technology—the computer—for processing examination results which, in fact, require very low-level computation skills.

In this context, it may be no less interesting to note that there exists a powerful Western lobby in the sphere of education which resists certain changes and indulges in a systematic propaganda. The press as defender of freedom of expression gets exploited by these elements. A reference about controversy positioned on 10+2+3 might have been noticed by most of us. The government had taken precaution to produce enough suitable literature to explain the scheme to people. The teachers, by and large, welcomed the proposals even though they stood the risk of suffering from nationalization of posts. Yet, the scheme got denigrated by a section of people as a "leftist model with work experience", "sixteen subjects" and such other bogeys raised to boost their case. When the government changed in 1977, the din of controversy was in a low key, but the whole scheme got distorted. The proposals like delinking schools from public examination and recruitment of civil services from degrees, got shelved. It may be noted that the West has already considerably changed its own system of examinations but

[11] R.P. Tiwari (Ed.) *Critique of education for our people*, South Asian Publishers, New Delhi, p. 116

we are advised about otherwise, except the objectivity in scoring, branding the whole set of academicians was dishonest. What a sly way of the nation's character assassination. There could have been various other self-respecting measures to resort to.

There appears to exist some sordid conspiracy to keep India backward and accordingly to cut it to size. It is a game to motivate her to practise the two- or three-track system of education—(*i*) English-medium elites, (*ii*) intermediate tier and (*iii*) lower level ignorant masses. The consequential backwardness ensures a reasonable market for foreign goods. The talented Indians provide the developed nations and their projects elsewhere with 'intermediate' level experts and technicians without spending anything on their upbringing. The wage gap is such that 'ours' become 'theirs' who in most cases miss no opportunity to disparage their own country both from outside and inside.[12] This 'brain-drain' is hard to check—a kind of trickery played by the clever cuckoos on foolish crows

Possible Remedial Measures

From what has been stated earlier, it is apparent that the following three broad categories of foreign influences ordinarily operate:

1. Continuation of the legacy of the British period and pressure manipulation to continue the stranglehold, e.g. learning of English language, patterning of syllabi to be in line with British book trade, undermining, etc. Spread of ideas not in line with those of Anglo-American bloc, hamstringing the growth of science and technology beyond a limit.
2. Introduction of new-fangled ideas to ensure sphere of influence with political, commercial and other such considerations of developed nations.
3. Religio-political motives of foreign missionary and petroleum dollars.

Education is a very sensitive area, especially because its effects are indirect and have often delayed reaction, deep and insidious. These programmes deal with impressionable minds, rendering them of doubtful quality for almost whole span of his/her life Hence the curriculum, curriculum methods and material should be carefully chosen and wrong values through the study of foreign languages and literature should carefully be guarded against. There are various ways and means to do so. We may remember that one does not ordinarily admit a stranger to one's bedroom.

Foreign aid in the field of education is of marginal significance only. It need not be accepted for a programme to be executed under the overarching direction of foreign experts, even if it be from any international organization. A distinction in wage rate linked with such programmes is often founded to be unhealthy, rather corrupting. Such programmes would distort the national objectives and priorities. They even have a demanding influence on personnel—teachers, administrators, researchers, etc. "Of overwhelming importance is what the underdeveloped countries themselves decide to do, and succeed in accomplishing in regard to educational reforms."[13] Foreign experts can be consulted, but according to our require-

[12]Gunnar Myrdal, op. cit., p. 209: The developed countries have shown generosity in making it possible for students of underdeveloped countries to study... often there is also hope of bringing them over to political opinions favoured in the aid-giving countries.

[13]Gunnar Myrdal, op. cit., p. 210

ments. As far as possible they have to be our choice. However, they should not be taken as participants in decision-making. Unfortunately, neither the foreign experts nor our decision-makers seem to be careful about this delicate nature of relationship. As a corollary, it is also necessary to exploit minimally goodwill motives of developed countries, not so much out of suspicion, but on principle that one man's meat may be another's poison In a donor-donee relationship some unsavoury situation are often overlooked by way of courtesy which may prove very harmful ultimately.

Since we were habituated to being at the receiving end by way of policy decision makers during British days and as aid-receiver-cum-borrower afterwards, we seem to have developed a servile attitude towards the West. There appears to be a feeling amongst a section of scientists and technologists that we cannot survive without being energized through a contact with the West. A doubting Judas is branded either as a revivalist or a fellow-traveller This sense of inferiority, especially in respect of science and technology, has to be overcome. It is not enough to be self-reliants ; we should also learn to feel so The craze for the pat on back by a foreign scholar or publication of research papers in foreign journals even of doubtful standing, is indicative of loss of our sense of self-confidence.

In order to take an independent and critical view of a thing, we should begin to evaluate various plans and programmes against well-conceived criteria. There is thus a need to have agencies to keep a close watch on our contacts and borrowings on the basis of evaluation and feedback These reports should be published to keep the public well informed. The foreign ideas, paradigms and materials then may be adopted, adapted, partly accepted after weighing them against our needs and circumstances They should be suitably verbalized and acclimatized

Most of the programmes in education, be they of sciences, technology, humanities or social sciences, the approach is by and large ad hoc An ad hoc programme cannot be evaluated, for the basic goals are not properly visualized in such cases. The national education policy covering sciences and technology needs to be laid down much more thoughtfully, for these are two of those main areas of education for which we look to the West almost reverentially. This leads to distortions in our educational policies from which we find it hard to extricate. It is, therefore, necessary to lay down goals of education in very certain terms, evaluate our plans and project against them and then, give the matter a wide publicity inviting public debates, whenever there is the slighest controversy. This will save us from both adverse internal and external influences. The vested interests will then have much less chance to fish in the troubled waters of hesitancy, confusion and vile sense of inferiority which are becoming our habit even after three decades of Independence. Our leaders were aware of it even in the early days of our freedom struggle, but we seem to have become complacent about the murky colonial influences after attaining political freedom. Why has it happened ? Let us question ourselves. A reference to what Shri Aurobindo thought on this issue more than 60 years ago may be relevant :

> On the other hand to take over the English, German or American school and university or some variation on them with a gloss of Indian colours is a course attractively facile and one that saves the need of thinking and a new experiment; but in that case there is no call for this loud pother about nationalising education; all that is needed is a change of

control, of the medium of instruction, of the frame and fitting of the curriculum and to some extent of the balance of subjects. I presume that it is something more profound, great and searching that we have in mind and that, whatever the difficulty of giving it shape, it is an education proper to the Indian soul and need and temperament and culture that we are in quest of, not indeed something faithful merely to the past, but to the developing soul of India, to her future need, to the greatness of her coming self-creation, to her eternal spirit. It is this that we have to get clear in our minds and for that we must penetrate down to fundamentals and make those firm before we can greatly execute. Otherwise nothing is easier than to start off on a false but spacious cry or from an unsound starting point and travel far away from the right path on a tangent that will lead us to no goal but only to emptiness and failure.[14] □

[14] *Sri Aurobindo on Education*, Pondicherry, pp. 2 and 3

Human Relationships in Educational Administration

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The modern principal should not be content to be a respondent to teacher-student needs alone. He is a leader, a source of ideas encouraging—indeed daring teachers—to adopt needed new content, to vary their methodologies, to be creative, innovative in instruction. Actually, a 'good' principal is infectious—infect the total school environment with the willingness to try new things, a cordial climate of human relationships and a reasoned hopefulness.

Educational administration has become a complex and exacting profession that demands a high order of competence and statesmanship. In general, the competencies or skills required for administration can be classified into three categories—conceptual skills (academic), technical skills (instrumental) and human relations skills (expressive).

Conceptual skills deal effectively with ideas and demand a high level of intelligence in dealing with abstractions and an open inquiring and creative mind enhanced through broad general education.

Technical skills relate to the ability to work with things. They are the inanimate aspects of the school environment which are gained through education and experience.

Human relations skills relate to the ability to work effectively with people. Much of what the administrator accomplishes, he undertakes through people. Several studies have shown that administrators succeed or fail largely on the basis of their ability to get along with people. This means that administrators should have interest, understanding and respect for people. Human relations skills are largely a function of the administrator's personality and character. These skills can also be improved through experience and through the study of the social sciences particularly social psychology.

If an administrator thinks about his major concerns of the past week, he will discover that many of them centre on his relationships with people Administrators in particular are involved with people, for coordination of human effort is the essence of administration, and "the resolution of human problems is administration's lifeblood". Actually, administration includes both a task-dimension and a human-dimension, that is, there is the work of the organization which must be done if the organization is to be successful, and there are the human beings for whom the organization provides varying degrees of satisfaction and upon whom it must rely in order that the work will be done. An effective administrator needs to understand both dimensions and develop the necessary competence in both.

Although problems of human relationships are as old as mankind, such problems have become aggravating as technology has developed. These problems have become manifest in the form of high crime rates, racial confrontations, international tensions, corruption, etc.

Like the rest of society and its organizations, the schools also are troubled by upheavals. *Students* are restless, use drugs or alcohol, and many are dropping out of school and out of society. *Teachers*, through stronger associations and collective bargaining, are demanding better schools, better working conditions and greater material rewards. *Parents* are actively criticizing the schools, some insisting that schools change more rapidly and others opposing change. The education of the children in the schools is embedded in all these tensions If tensions are dealt with constructively, the students can develop "coping patterns of interpersonal behaviour". Thus, in educational organizations as well as in society, attention to the human as well as the task-dimension is urgently needed

Also, the human and task-dimensions of organizations are inseparable. Because human relationships affect the ways in which individuals function, human relationships are central to task achievements in administration. And conversely, because the extent of task achievement affects the ways that people feel about themselves and others, task achievement affects human relationships. There are three reasons why administrative relationships have far-reaching effects in education.

First, an administrator helps to achieve the goals of the educational enterprise through other people. Principals do not ordinarily undertake directly the work that needs to be done; they do not teach the children, sweep the floors or prepare lunch in the canteen. Instead they plan, stimulate, coordinate, direct, and evaluate the work of other people. It is of great importance, therefore, that an administrator works well with people if he or she is to be effective.

Secondly, human relationships are the stuff of which personality develops. Within the limits of an inherited organism, a person becomes what he is largely as a result of the meanings which he attaches to his relationships with other people.

Thirdly, they are not merely a means, they are an end in themselves. We human beings possess infinite values because we need each other. We need not only one another's services, we need each other as persons. Because we need each other, no one is replaceable. For those people who know and care about us, no one else can take our place.

But that does not imply that an administrator should tolerate incompetence, avoid conflict, defer decisions, or always be 'nice'. The relationships of administrators to other people, however, are not only for the purpose of providing competent teachers,

devising educational programmes, constructing and maintaining school buildings, and obtaining the necessary funds. Important as these ends are, the human relationships themselves are an essential aspect of life—both to the administrator and to the people with whom he or she relates.

Human relationships appear in such variety that one is likely to assume that there are no common elements which provide a basis for analysing them. If we read a book or hear a lecture about human relationships and then try to apply specifically what we have learned, we are often baffled by the fact that our own situation is sufficiently different. Human relationships consist of the interplay between personalities, and since personalities are unique, so human relationships are endlessly varied and always changing. To provide general guidelines for administrative action in all aspects of human relationships, a few principles are provided for practical use. They are an outgrowth of many psychological theories—neo-Freudian, phenomenological, and human system theories.

1 *Basic to a consideration of all human relationships is the fact that each of us substantially affects his or her own relationships with others.* Each of us functions in ways which affect in large measure the kinds of situations in which we find ourselves. Research has demonstrated that the situation does affect the way in which a person functions at a particular time. However, according to clinical evidence, the individual himself is an important casual factor in his human relationships. If an administrator provides opportunities for the staff to share in the responsibilities and opportunities inherent in the functioning of a school, the staff will usually respond with healthy enthusiasm, if not immediately, then over a period of time.

2. *Strength of self is central in effective relationships.* Each person needs to develop in terms of his or her own individuality and uniqueness in order to be effective in human relationships. An administrator who is developing as self is one who is searching for ways in which his or her potentialities and those of the staff can be more fully realized He will be most effective, not if he tries to be a carbon copy of someone else, but rather if he acts independently and utilizes his own strengths and potentialities in the administrative role

3. *Good human relationships are those which are functional* They are appropriate for the performance of necessary tasks. They exist when work is done effectively, and by the same token, optimum work accomplishment is possible only when good human relationships are experienced. One implication of functional relationships is that the administrator must be able to control some part of their own time. No one can function at a professional level without time to think and to plan. Wiles recommends that school administrators "keep an open door to all staff members".[1] This recommendation is sound if taken in spirit rather than literally. An administrator needs to reserve time to consider the major dimensions of the job, or he will get lost in detail and lose the perspective which is the hallmark of a true professional. Such reservation of time for thinking and planning need not make an administrator inaccessible Functional relationships suggest also then, an administrator should require that staff members and students be held responsible for their actions. Such an approach is desirable simply because things work better that way; people learn to function more effectively

[1]Kimball Wiles, *Supervision for better schools* (2nd edn), Englewood Cliffs, N T. Prentice-Hall, Inc., 1955, p. 49

through being held responsible, and at the same time, necessary work gets done.

4. *Good human relationships acknowledge the importance of reality of people, things and relationships as they are* Good human relationship is based on life as it is not upon an idealized vision of nice people who are always good The administrator's task is to function effectively in the world as it is. They must be aware of threats to programmes or to their status and by fighting back when necessary To be in touch with reality an administrator needs also to consider both his or her own and other's motivations, for only as motives are known can human behaviour be understood. However, if an administrator can consider motives and still maintain a reasonable sense of trust, remaining tentative in his judgements concerning motivation, he will have a useful device for achieving a better understanding as why people behave as they do.

5 *The goal of effective human relationships is continued improvement in the functioning of individual persons and groups* To achieve this, attention must centre both on the processes of functioning and on the completion of important work-tasks. Effective human relationships are those which enhance individual personality through time. The goal is to help the various persons learn, grow and develop. It is important that each individual be enabled to develop his or her potentialities to the greatest possible extent.

6. *Human relationships can best be understood through the utilization of systems theory. The theory makes possible the conceptualization of many complex phenomena* The concept of social system means that the behaviour of an individual is not an isolated phenomenon but rather occurs as part of a system and is interwined with the behaviour of others. An administrator who thinks in terms of systems recognizes the importance of the correct social scene for the goals and procedures used in the schools and helps to relate the school programmes to the ever-changing needs of the society within which it operates.

Two conceptualizations of the school as a social system have been presented : one, in terms of actual interacting persons[2] and the other in terms of analytical abstractions.[3] To the extent that these conceptualizations mirror reality, they are useful in helping one to see the school as it really is an integral system functioning through continuous interactional relationships. An administrator who views the school as a system will function quite differently from one who views the school as consisting of many separate and discrete parts. In the former case, the administrator will be concerned with the functioning of the whole system and will consider the implications of a specific action for the whole system. Moreover, in diagnosing problems, an administrator with a 'systems' view of the school will look to casual elements which are reflected in the functioning of the system rather than solely to individual behaviour.

The relationship between teachers and the administrator is marked by greater formality and psychological distance. Writers have listed techniques that could be used to promote the desired state of relations. In 1950 Kimbal Wiles detailed suggestions that could be used by administrators to promote staff harmony—being

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[2]J.W. Getzels A psycho-sociological framework for the study of educational administration. *Harvard Educational Review*, 22 (Fall 1952), 235-46

[3]Talcolt Parsons. An overview. *American sociology Perspectives, problems, methods* T. Parsons (Ed.) New York, Basic Books, Inc., 1948, p. 322

polite and courteous, being accessible, taking prompt action on a request, letting the people know when they did a good job, being willing to listen, offering assistance in setting group disagreements, giving credit where due and being cheerful

Norman Fenton's *Mental Hygiene in School Practice* considered the principal as a 'parent-person' to teachers. To maintain desirable relations and high morale among teachers, the principal was advised to give attention to the economic and social aspects of the teacher's life, moderate criticism, make judicious use of praise, be mindful of the personalities and problems of teachers and give advice conducive to the development of the full potential

The challenge to every administrator, and the great opportunity, is to provide for educational experiences through administration which takes account of both the task and the human dimensions of educational organization Such educational experiences can help to assure that the human foundations of our society will not disintegrate, but rather will support "a humane technological society" in which men and women can live with zest and hope, more capable of fulfilling their vast potential for functioning in a manner which is satisfying and productive, both for themselves and for the whole society. □

Need of Piagetian Testing for Intellectual Assessment

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We live in a time when test scores play a major role in decisions about people particularly students in schools. Test results and school grades in a large part determine how students move through the educational maze. In this regard some persons become persuaded that they are bright, successful, and talented. Other persons become persuaded that they are dull, failures and without promise. Failure to perform well and subsequent poor grades are viewed by many as the major problem in education today.

We are living in a test-crazy society. One of the areas of greatest confusion and ignorance is IQ testing. Intelligence is a concept surrounded by mystery, mysticism, and above all ignorance. It is a psychological construct. We infer the existence of intelligence from behaviour. The behaviour we typically look for in determining intelligence is test performance, because testing is assumed to be the most organized, systematic and valid procedure available for determining intelligence. We cannot assess intelligence directly. Like all psychological construct intelligence is subject only to observations.

Assessment of intelligence starts with a conception of intelligence based on assumption and inference. Conceptions are subjective. If one's conception of intelligence is that it is inherited and fixed, one will come to the conclusions that are different from those derived from conceptualizing intelligence as developed, acquired, or changeable. The teacher who sees intelligence as inherited, fixed, etc. is unlikely to try to help the ten-year-old who has been left back two times and is poor performer in the school. The teacher who sees intelligence as developed, acquired, etc. might try to figure out why the child has been learning inefficiently. As teachers we know how intelligence directly affects to conceptualize things and how we behave towards our students. This

article deals with assessment of intellectual development through Piagetian approach.

There are basically two formats for testing in education: group and individual testing. The advantages and disadvantages of each procedure are fairly obvious. In education, tests are presumed to be used when information about ability, learning, personality, and so forth is needed. In this connection individual testing is more useful to evaluate more carefully and thoroughly an individual's performance. Piagetian testing's approach is mainly individual testing.

Piagetian testing is something different from traditional IQ test such as the Wechsler intelligence scale for children (WISC). Traditional tests measure a wide range of abilities, including verbal skills, specific facts acquired, visual skills, motor skills and combined visual/motor skills. According to Elkind : Piegetian tasks primarily assess reasoning ability (logical thought) with respect to those concepts children have learned more or less on their own without directed instruction[1].

One distinct advantage of a Piagetian-type assessment is that the interpretation of results is always reasonably clear. Piagetian tasks evolved out of Piagetian theory and the interpretation of results is always in terms of Piaget's theory. Thus if a child cannot conserve number and cannot perform adequate classifications and seriations, Piagetian theory suggests that the child does not yet have stable number concepts or is prenumerical. Such a child is not going to comprehend formal arithmetic instruction.

The most frequently used IQ tests are not based on a particular theory and the interpretation of results makes difficulty. For example, if a child is asked, "Who discovered America ?" and responds, "Columbus", what does this mean ? Is there any reasoning involved in the response ? Is this something the child recalled or memorized ? What interpretation does this lead to ? What if the child's response to the question was, "I do not know." Does this mean there is no intelligence involved ? In this sense traditional tests seem to be almost exclusively concerned with content, while Piagetian measures are concerned with reasoning and the dynamics of thought. Piagetian tests reveal no sex differences among boys and girls in general and suggest that the development of logical thought proceeds at about the same rate in both sexes. Another point is that, in conventional IQ test and achievement test verbal abilities account for a large portion of a child's performance. A Piagetian scale in some respects acts to minimize the dependence on verbal skills and maximize dependence on reasoning ability. Piagetian methods ensure that the child understands what the examiner is getting at.

Tests such as the WISC and Stanford-Binet are clearly 'biased' in favour of children from middle class, educationally oriented families. They are clearly biased against lower classes. Tests are not culture free. A Piagetian test is not entirely culture free either. But research has shown a remarkable consistency across very different cultures in the ages at which children attain levels and types of logical thought.[2] Piaget (1971) writes :

> In some social environment the stages are accelerated, whereas in others they are more or less systematically retarded. This differential development shows that stages are not purely a question of the maturation of the nervous system but are

[1]D. Elkind, *Two approaches to intelligence : Piagetian and psychometric*, McGraw-Hill Co, New York, 1971

[2]J.S. Bruner, R.R. Olver and P.M. Greenfield (Eds.) *Studies in cognitive growth*. Wiley, New York, 1966

dependent upon interaction with the social environment and with experience in general

There is almost perfect consistency in the sequence or order in which structural concepts are acquired. If one becomes familiar with Piagetian assessments and standardized intelligence tests such as the WISC, it becomes clear that they measure different things. The Piagetian method can give information about a child's level of cognitive development and reasoning skills that is not available from the WISC. The WISC can give information about a child's general store of information, verbal skills, and some aspects of visual and motor performance that are not directly available through Piagetian methods, and that abilities do not require logical reasoning and thought.

Lastly, from cognitive development perspective, education should be directed to help the child maximize his intellectual, social, and ethical development and to structure educational programmes so as to encourage the acquisition of skills in ways that are consistent with development. We need to make better use of what we know about how children develop and learn and what we know about the individual differences between children If a more appropriate match between children's development and their educational experiences can be made, classrooms and schools can become more productive, more enjoyable, and more supportive places for everyone involved—children, teachers and parents. Henceforth, teaching-learning system should be as per students' intellectual level and this requirement can be fulfilled through the Piagetian test of intellectual assessment. □

Educational Development of the Scheduled Castes

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THE PROBLEMS of educational backwardness of the scheduled castes, whose population is now about 100 million, i.e. about 15 per cent of the total population in the country, have their origin in the traditional caste system of the Hindu society, which consigned them to a position of extreme economic, educational and social disadvantage. They not only suffer from the oppression of economic exploitation but are also victims of social discrimination arising from the evil practice of untouchability. They have few assets and are generally dependent on unskilled farm operations and other low-income occupations. They mostly continue to pursue the traditional occupations and are generally unable to avail themselves of the new employment opportunities generated through various educational and economic development programmes.

The British government recognized the pitiable condition of these people but it did not make serious efforts to change it, other than giving some marginal educational facilities to them. The government was apparently more interested in maintaining the *status quo* rather than significantly improving and changing the lot of the people. Even when the portals of educational institutions in the country were thrown open to members of the 'untouchable

*Inaugural address by the author in the National Seminar on Educational Development of Scheduled Castes at the Indian Institute of Education, Pune, on 30 January 1982

communities', education continued to be a virtual monopoly of upper castes. The educational condition of scheduled castes during the thirties have been forcefully brought out by the Indian Statutory (Simon) Commission in its Report. It said :

> The education of these classes raises a question of great difficulty and importance since their children are, in many places, 'actually excluded from the ordinary public schools on the ground of caste alone ..', while it is true that caste prejudice is in many areas rapidly disappearing, it is difficult to exaggerate the disadvantages under which members of the depressed classes suffer in some places. In certain areas, an 'untouchable' still causes pollution by presence as well as by contact, and in these areas many of the public roads and wells cannot be used in daylight by the depressed classes. Publicly managed schools are not infrequently located on sites which are entirely inaccessible to the depressed classes, and even in those areas in which their children are admitted to the ordinary schools it often happens that the depressed class pupils are made to sit separately in the classroom or even outside the school buildings.

They were, so to say, outside the pale of the Hindu society. There is no wonder that J.H. Hutton, the Census Commissioner during the thirties, characterized them as the 'exterior castes'. For a long time they continued to be referred to as 'untouchables'. Mahatma Gandhi in order to remove this stigma of untouchability referred to them as 'Harijans', the children of God. But in course of time this word itself was stigmatized and it became synonymous with 'untouchables'. Thus, the freezing of social evolution during the colonial rule led to the perpetuation of the socio-economic handicaps of Harijans.

Position during Post-Independence Period

It was only after independence that the government focused its attention on the educational development of the scheduled castes. Education is the most powerful instrument for achieving socio-economic development and transformation on egalitarian lines. The framers of our Constitution, therefore, took special note of the condition in which the people from these communities lived and provided several safeguards for the promotion of their educational and economic interests. Special mention may be made of Articles 45 and 46 of the Constitution. Article 45 of the Constitution directs that "the State shall endeavour to provide within a period of ten years from the commencement of the Constitution for free and compulsory education for all children until they complete the age of 14 years" This is followed by Article 46 which provides that "the State shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the scheduled castes and scheduled tribes and shall protect them from social injustice and all forms of exploitation".

Following essentially this policy as laid down in the Constitution, special efforts were made in the successive Five Year Plans to raise the educational levels of the scheduled castes to that of others. The educational facilities provided under the various schemes can be put into three categories : (*a*) state government, (*b*) central government, and (*c*) non-official organizations. There is scope for greater integration among these three agencies in order to accelerate the pace of progress. For inspiring the educational level of scheduled castes, special schemes for pre and post-matric scholarships, educational incentives like provision of books, stationery, uniforms, coaching classes, boarding grants, hostel facilities, etc. are being included in successive Five Year Plans. By 1985, it is envisaged that about 105 lakhs children of scheduled castes/scheduled tribes and other backward classes would be benefiting from stipends/scholarships and other incentives at pre-matric level and that 8 lakhs scheduled castes/tribes students would be receiving post-matric scholarships. The scheme of post-matric scholarships is an open-ended scheme, i e. there is no financial limit to this. Every eligible student can get a scholarship irrespective of the total amount required to give these scholarships These steps have helped to some extent to improve the opportunities for education to the scheduled castes Their literacy enrolment is, however, still lagging behind that of the general population.

In 1971, as against the all India literacy rate of 39 for males and 19 for females, the literacy of Harijan males was 22.4 and for Harijan females it was 6.4. While the increase in the literacy rate during 1961-71 among the total population was 5.3 it was 5 among scheduled castes. Increase in the literacy rate among Harijan males was, however, 5.47 as against 5 among the total male population. The increase in the literacy rate during the same period among Harijan females was 3.16 as against 5.75 among the total female population in the country. This indicates that the progress of girls among scheduled castes has been lower than that of the general female population. In some of the states, the literacy rate among Harijan females was just around 1. Table 1 sums up the literacy rate among general population and scheduled castes in 1971.

TABLE 1

LITERACY RATES AMONG HARIJAN AND GENERAL POPULATION (1971)

Sex	*General Population*	*Scheduled Castes*
Male	39.45	22.43
Female	18.70	6.45
Total	29.45	14.67

The increase in the enrolment of scheduled caste children has been more rapid than among the general population since 1961. The total enrolment of scheduled caste students in all types of recognized institutions increased from 19.67 lakhs in 1960-61 to 118 lakhs in 1976-77. The increase in the enrolment of scheduled caste was 138 per cent during this period as against 108 per cent for all communities. This higher increase among the scheduled castes was to some extent due to the low base in their case. Table 2 indicates the extent of increase in the enrolment in different types of educational institutions among the total population and the Harijans during 1961-76.

TABLE 2

TOTAL ENROLMENT AND ENROLMENT OF SCHEDULED CASTES

(Enrolment in 000's)

Types of Instructions	*1960-61*		*1976-77*		*1961-71*	
	Total	*Scheduled Castes*	*Total*	*Scheduled Castes*	*Total*	*Scheduled Castes*
Pre-primary schools	121	6	433	46	258	666
Primary schools	26642	3196	48613	6660	83	108
Middle schools	10611	920	25147	2732	137	197
Secondary schools	7511	532	20043	1899	167	256
Colleges for general education	768	39	3036	248	295	536

In spite of the higher percentage increase in the enrolment of scheduled castes during 1961-76 when compared with the total population, the scheduled castes are still lagging behind. Table 3 provides data on the enrolment of scheduled castes in 1976-77 by stages of instructions in the country and the coefficient of equality.

TABLE 3

ENROLMENT OF SCHEDULED CASTES IN 1976-77

	Enrolment in 000's		*Enrolment of Scheduled Castes as Percentage of Total Enrolment*		*Coefficient of Equality*	
	Girls	*Total*	*Girls*	*Total*	*Girls*	*Total*
1. Pre-primary	28	62	9 3	9 2	61.8	61.1
2. Primary (Classes I-V)	2935	8885	11.1	12.9	73 1	85 7
3. Middle (Classes VI-VII)	422	1671	7.9	10.0	52.5	66 4
4. Secondary stage	140	667	6.8	9.2	45.2	61.1
5. General higher education	38	143	3 8	7.3	25.2	48 5
6. Vocational education (school stage)	40	293	13.3	12.9	88.4	85.7
7. Higher professional courses	8	59	5 2	6.5	34.5	43.2
	3610	11780	10.2	11.8	67.8	78.4

The coefficient of equality has been worked out as under :

$$\frac{\text{Proportion of scheduled caste enrolment to total enrolment} \times 100}{\text{Proportion of scheduled caste population to the population of other communities}}$$

One more point which emerges from these data is that there is sharp reduction in the coefficient of equality with every higher stage of education. For instance in 1976-77, the extent of coefficient of equality declined from 85.7 at the primary stage to 48 5 at the university stage. One redeeming feature is that the coefficient of equality improves in vocational courses. In other words, it means that a larger proportion of scheduled caste children go to vocational courses than of other groups. The coefficient of equality of the scheduled

castes in all categories of educational institutions shows considerable variation from state to state. While the coefficient of equality was 100 or above in Assam, Gujarat, Kerala, Maharashtra, Manipur and Tripura, the states of Uttar Pradesh, Bihar, Rajasthan, and West Bengal are at the lowest rung. Those states which are educationally advanced have, by and large, satisfactory coefficient of equality of scheduled castes. Special efforts are required to be made in the educationally backward states to promote education of the weaker sections of the society and particularly of girls.

Wastage and stagnation, two of the serious banes of our educational system, are very much higher in the case of scheduled caste children. If the rates of wastage and stagnation among the scheduled castes were to be the same as those in the other communities, the coefficient of equality at higher stage of education should have been the same as in Class I of the primary stage. With every higher class the coefficient of equality of scheduled castes declines. Data on the classwise enrolment, percentage of scheduled castes to the total enrolment up to Class X and the coefficient of equality of scheduled castes in 1976-77 are given in Table 4.

TABLE 4

CLASSWISE ENROLMENT, PERCENTAGE TOTAL ENROLMENT AND COEFFICIENT OF EQUALITY OF SCHEDULED CASTES IN 1976-77

Class	*Enrolment (in lakhs)*	*Percentage of Scheduled Castes to Total Environment*	*Coefficient of Equality*
I	31.71	14.0	93.0
II	19.74	12.6	83.7
III	15.89	12.7	84.4
IV	12.17	12.1	80.4
V	9.34	11.4	75.7
VI	6.89	10.4	69.1
VII	5.44	9.9	65 8
VIII	4.38	9.6	63.8
IX	3.48	9 3	61.8
X	2.61	8.9	59.1

The caste as a fector influences the rate of particpation as well as retention in the educational system. A survey of non-enrolled, non-attending and drop-out children of 6-14 years age-group in Hazirabagh district of Bihar

carried out by the A.N.S. Institute of Social Studies at the instance of Planning Commission revealed that while 85 per cent children of higher castes in urban areas and 76 per cent in rural areas were enrolled in primary schools, the enrolment of scheduled castes children was 56 and 37 4 per cent, respectively There are various reasons for the low enrolment and higher wastage among scheduled caste children. Economic compulsions as well as indifference of parents contribute to this situation. The child is an economic asset to the weaker sections of the society. He starts supplementing the income of the parents at a very early age and the girls look after younger babies when parents go out to work The scheduled castes are frequently not aware of the value of education to the same extent as other classes and consequently children being assigned parental responsibilities at an young age tends to be more frequent among them. The Commission for Scheduled Castes and Scheduled Tribes has rightly remarked ·

> It has indeed been noticed that parents of students coming from the so-called upper castes sometimes pinch themselves to great extent, for the education of their children, than those, who are new-comers in the field. They even look upon this sacrifice as a part of their duty. The same feeling has to be created among members of the scheduled castes and scheduled tribes. And perhaps this can be done more effectively, if the teachers come into frequent contact with the guardians or their parents. At present there does not seem to be any communication between the two. But it is an aspect of our educational system, which has to be developed in a planned way.

Today, we have over 30 lakhs of teachers working in schools at various stages of education. They need to be oriented towards this. A new programme need not be started for this. Inservice training of teachers is now being taken up in a big way and teachers are being called for refresher courses for a number of programmes such as updating their knowledge about curriculum, introduction of new items like work-experience, population education, environment education, etc When the teachers meet together for their inservice programmes they should be made conscious of their responsibility towards the weaker sections of the society. The teachers should establish close contact with the parents of scheduled castes so that the parents' view of their children's educational performance may be improved. The teachers should try to change the attitude of the parents towards education and orient them to the need and importance of motivating their children for learning. The teachers should also be trained to guide the scheduled castes students in educational and vocational guidance as these children cannot get this advice from parents. The mass media which has been well developed in our country should be used for bringing home, in a simple language, to every citizen that an illiterate person has no future and that the parents should ensure education for their children and that no sacrifice on their part is too great for achieving this objective.

To combat the problem of poverty in the expansion of elementary education, non-formal/part-time classes are being expanded in the Sixth Five Year Plan The Central Government is assisting the nine educationally backward states by giving 50 per cent central assistance for opening of non-formal/part-time classes. It is hoped that about 80 lakhs children may be enrolled in these classes by the end of the Sixth Five Year Plan. The children of the weaker sections of the society can attend these classes while looking after their duties at home. The state governments of Rajasthan and Madhya Pradesh have also started 'earn while you learn' programmes. The children undertake some productive work in the schools. The produce is purchased by the education department and the profits are distributed among the children. This enables the children of the poorer sections of the society to continue education. All states should start similar programmes which can help to meet the prevailing economic compulsions and promote learning by doing.

Education has not reached evenly to all sub-castes among scheduled caste and among different areas of the states. A few studies carried out on the utilization of post-matric scholarships by scheduled castes indicated that the major share of the scholarships has been availed of by a few sub-castes. The benefits of government assistance for higher education to the scheduled caste accrue most to the more enlightened or the more privileged among them. An evaluation study of the post-matric scholarships awarded to the students belonging to scheduled castes in 1966-67 in Gujarat indicated that there was disproportionate distribution of post-matric scholars from various sub-castes of the scheduled castes in the state. This is indicated in Table 5.

TABLE 5

PERCENTAGE DISTRIBUTION OF THE SCHEDULED CASTE POPULATION (1961 CENSUS) AND POST-MATRIC SCHOLARSHIPS (1966-67) ACCORDING TO SUB-CASTES IN GUJARAT

Sub-caste	*Per cent Population (1961 census)*	*Per cent Scholarships 1966-67*
Vankar, Mahaya Vanshi	43.48	69.87
Khalpa, Rohit, Chamar, Bhambhi, Chambhar	22.80	20.60
Meghwal	9.81	1.00
Bhangi	14.01	2.56
Others	9.90	5.97
	100.00	100.00

Out of a total of 68 scheduled castes communities in Gujarat, there was not a single post-matric scholarship, either in 1967-68 or in 1971-72, from as many as 28 scheduled castes communities. Another finding which emerged from this study was that a larger population of the scholarships were availed of by the children of the persons working in factories and in offices. These persons are relatively better paid and have usually a more stable income than that of their counterparts on farms and in other places Further, it is possible that the children of labourers working in mill/industry in urban areas are more likely than others to pursue higher education, partly because of availability of facilities for higher education in urban areas and partly because of available information regarding government assistance for higher education. While 27 per cent of the scheduled castes population was in urban areas in Gujarat in 1971, the percentage of post-matric scholars from urban areas was 48. More than two-thirds of the scheduled caste female post-matric scholarships were from urban areas. The Gujarat study further indicated that 36 9 per cent of the post-matric scheduled caste scholarships were from Ahmedabad and another 17.6 per cent were from Mehsana district The remaining 55.5 per cent of the scholars were from the other 16 districts. Steps are required to be taken to promote education in the sub-castes and in areas which are still lagging behind in regard to the utilization of educational facilities and various incentives offered by the state. Bhangis or sanitation workers need particular attention, since they belong to the most under-privileged section among the scheduled castes

The number of scheduled castes teachers in all types of institutions in 1976-77 was 1.92 lakhs which constituted 6.2 per cent of the total number of teachers as against their population of 14.6 per cent. As in the case of enrolment, the proportion of scheduled castes teachers decline with every higher stage of education. While in the primary schools, the proportion of scheduled castes teachers was 8.3 in 1976-77, it declined to 1.5 in colleges of general education and to 0.6 in universities. It was only in the states of Gujarat and Maharashtra that the proportion of scheduled castes teachers was more than their proportion in the total population of the state.

The responsibility for the educational development of scheduled castes are being shared by the Departments of Education, and Harijan and Social Welfare in the states. There is no clear demarcation of the responsibility of these departments. Adequate arrangements have not been provided for reviewing and evaluating the educational progress of the scheduled castes on a continuing basis for the state as a whole. There exists an overlapping in the formulation and implementation of almost all the programmes of incentives and financial concessions that are being operated in various states by more than one department. There exists at present, little coordination among the various departments either at the time of formulation of the plan programmes or implementation. This needs to be rectified and a proper coordination between various departments should be ensured.

During the Sixth Five Year Plan, special component plans are being drawn as part of various programmes to enable scheduled caste families to cross the poverty line within as short a period as possible. A special central assistance of Rs. 600 crores will be provided to the states for the development of scheduled castes during the plan period

Thus, over the last 3 to 4 decades, considerable progress has been achieved as a result of the correct direction of the government's efforts and the extra-ordinary persistence of the members of the scheduled caste communities in securing education against heavy odds, reminding us of Ekalavya of old. The index of literacy is considered to be a sort of summation of the basic educational progress of a nation or a community. The percentage of literacy of the scheduled castes was 14.7 per cent in 1971, as against 10.3 per cent in 1961, and 1.9 per cent in 1931 (exterior castes)

Unfinished Tasks

However, there is no room for complacency. There is still a long way to go for the fulfilment of the task of quantitatively and qualitatively equalizing the educational level of the scheduled castes with the rest. It is this realization that is reflected in the *new 20-point programme*, of which *point 7* is to *"accelerate programmes for the development of scheduled castes and tribes"* We should now take stock of where the educational development of scheduled castes stands with reference to the totality of the task, identify the specific unfulfilled tasks, the broad priorities and the lines along which our efforts in future should proceed and from the point of view of this seminar, map out areas where micro-research is required to throw light on the path of decision-making and implementation

The literacy percentage of the scheduled castes, namely 14.7 per cent in 1971, as mentioned earlier, should be compared with the all India percentage of 33.8 per cent for the rest of the community excluding scheduled castes and scheduled tribes. Further there is a lot of unevenness behind this figure. In some states, the general level of literacy among the scheduled castes is much lower than the all India rate of the scheduled castes. Also as mentioned earlier, the condition of education among women is even more unsatisfactory. The percentage of literacy among scheduled caste women is only 6.44 per cent as against 22.25 per cent for other women excluding scheduled castes and scheduled tribes. Here too there is unevenness. For example, the literacy percentage for scheduled caste women in Bihar is 1.03, in Rajasthan 1.25, in Uttar Pradesh 2.46, in Haryana 3.09 and in Madhya Pradesh 3.88. There are several districts in the country where the literacy among scheduled caste women is as low as 1.0 per cent going down even to 0.2 per cent.

Another continuing problem is that of the poor enrolment of scheduled caste children at every level of education, compared to the level of enrolment

of the rest. The gap in enrolment between the scheduled castes and the non-scheduled caste, non-scheduled tribe communities increases as one goes to higher and higher levels of education, indicating the acute problem of wastage and stagnation. No doubt, the problem of wastage and stagnation is a general problem of the whole country. But it is far more pronounced in the case of scheduled castes and scheduled tribes. Another interesting index is that out of about 2 lakh teachers at the universities and other institutions of higher education, only 2,621 are scheduled castes, accounting for a mere 1.43 per cent. The educational profile of the scheduled castes corresponds to their socio-economic profile. Some of the features that stand out in their educational profile are poor enrolment, poor retention, enrolment in inferior institutions compared to the others and poor performance on account of lack of integrated, comprehensive support commensurate with the handicaps imposed on them over the centuries by society.

In order to clearly understand the educational handicaps of the scheduled castes, we should recognize their socio-economic handicaps. On the economic side, they suffer from low-end poverty. Among the poorest of the poor, their proportion is very high, much higher than their proportion of 15 per cent in the population as a whole. As explained earlier, the majority of the scheduled castes are agricultural labourers. Recent studies have shown that even if they get the statutory minimum wages which they often do not get, for the average number of days for which they could find employment (for example, for men-labourers 256 days in Orissa, 232 days in Rajasthan, etc.) This average number of days may also often be unrealized in many parts—the total possible annual earnings of the family will fall short of the amount required for the family to be above the poverty line, except in Punjab. This takes into account earnings from child labour also, apart from the earnings of men and women In such a situation, the need for pressing into service even the children of the family is felt for getting bare subsistence income. It is unrealistic to expect that these families can afford to send their children to school. This is the biggest constraint in the way of the educational development of the scheduled castes. This is also true of other poverty groups of the scheduled castes like leather workers and other artisans, fishermen, civic sanitation workers and labourers in the unorganized sectors.

On the social side, the scheduled castes are unique in being the direct victims of untouchability. We have only to turn our eye inward to see the startling phantom of silent hostility against the scheduled castes. The overt discrimination and silent hostility against the scheduled castes, which are objectively relatable to 'untouchability', pose an extraordinary type of barrier to their advancement, which no other section of Indian society has had to face and, hopefully, will have to face

Taking into account the unfortunate realities of the socio-economic handicaps faced by the scheduled castes, which come in their way when, like

Ekalavya, they pursue their educational advancement, we have now to face the future with clear objectives. The Working Group on the Development of Scheduled Castes in the Sixth Plan 1980-85, has listed seven objectives of the development of scheduled castes, of which one is removal of the lag in the educational levels of the scheduled castes. This general objective has to be elaborated into specific objectives. Some of the important steps of elaboration of specific objectives, listed by the Working Group are the following :

1. Spelling out of the number of individuals of the scheduled castes to be enabled to complete education at different educational levels (including adult level functional education).
2. Analysis of each of the impediments like economic compulsion of scheduled castes agricultural labour families, traditional artisan families and other similarly placed categories to press into other service their children even to earn mere subsistence income.
3. Arising therefrom identification of the programmatic, financial, institutional, organizational and other inputs required for overcoming the impediments as in (2) above and achieving the targets as in (1) above.
4. Break-up of the numbers at (1) above in terms of the plan period and each year thereof.
5 Time and action schedule for each programme scheme.
6. The main responsibility for achieving the objectives being with the Education Department, identification of other related departments and arrangements for their integration and coordination in implementation, monitoring evaluation and, wherever required, timely remedial measures.

Let us now consider some of the major areas to which our efforts have to be directed. Among the major requirements of the scheduled castes in the field of educational development are the following :

1. Ensuring cent-percent enrolment at the primary stage. This will require, taking into account the opportunity cost of education for families engaged in agricultural labour and the like, institution of appropriate scholarships which will serve, at least to a reasonable extent, as compensation for this opportunity cost. This is particularly necessary for scheduled caste girls and children of scheduled caste familes in occupational categories like agricultural labourers, other rural labourers, leather workers and other artisans, fishermen, civic sanitation workers (sweepers and scavengers), marginal farmers including share croppers, and urban unorganized labourers. Without this basic remedy to the desperate situation, any plan or programme to fulfil the nationally accepted policy regarding the educational development of the scheduled castes can never succeed in the foreseeable future nor will it be possible to achieve universal elementary education in the country.

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2. Ensuring adequate enrolment at each of the post-primary levels so that they form at least 15 per cent of the total enrolled students at each level, at the entrance stage as well as at the leaving stage.

3. Integrated, realistic and imaginative support to enable them to achieve standard of performance comparable to that of non-scheduled caste and non-scheduled tribe students, for which they do have the potential. This will require organization of comprehensive preparatory training, remedial teaching, special coaching and entrance coaching at each stage and level.

4. Ensuring that they are able to get entry not only into ordinary institutions but in superior institutions in the due proportion.

5 Elimination of wastage.

6. Scholarships, fellowships, associateships and other incentives and facilities like free textbooks, free uniforms, midday meals, etc. The Home Ministry's post-matric scholarship scheme no doubt significantly meets part of the need, but there is a considerable gap.

7. Hostels are recognized as useful for the improvement of education for all. However, the need of the scheduled castes is much more acute and has got a unique dimension. It is possible for students of other communities, who are not able to get hostel accommodation, to get private accommodation elsewhere. But scheduled caste students find it very difficult to get private accommodation—it has to be admitted with shame, even in metropolitan cities. The present schemes meet a small part of the need, but there is a big gap.

8. Measures for building up their representation in the teaching community as well as non-teaching staff to the level of at least 15 per cent.

9. Human resources development, consisting of constructive and effective organization and training to develop social awareness and the capacity for taking initiatives for, and management of, their own development.

10. Education to enable them to distinguish the parameters of the middle-men layers, which are responsible for reducing the income of self-employed producers in the primary as well as secondary sectors and even in the tertiary sector, and to acquire the knowledge component necessary to secure elimination of all these middle-men layers from every economic activity in which the scheduled castes are engaged.

11 Occupational mobility.

12. Socio-moral education of society at large in order to cure it of harmful social attitudes towards the scheduled castes and to enable it to perceive the sufferings, plight and special problems of scheduled castes and to recognize that what is being done for them is only a small moral and material reparation for the damages caused in the distant as well as in the recent past and continuing to be caused even in the present It has also to be impressed upon society at large that what the scheduled castes have got so far, as a result of the correct policies of the government, is still far short of their due, whether it is the educational enrolment including higher education or in public employment and that there is no rational basis for them to grudge this since the policy of reservation is far from conferring disproportionate benefits on the

scheduled castes.

In order to achieve (*a*) the objective of quantitative and qualitative equalization, (*b*) fulfil the detailed specific objectives, and (*c*) meet the major needs of scheduled castes in their educational development, we have to focus on this task with all the instruments at our command—whether financial or organizational or other, like utilization of powers under section 12(k) of the UGC Act, and devise appropriate additional instruments, wherever there are gaps which cannot be filled by existing instruments.

Research has a major role to play in path-finding. Unfortunately, research pertaining to scheduled castes including their education is scarce, compared to the magnitude of the task. I am aware that there have been some valuable studies, but we need many more studies of the action-research type, which would lead to immediate decision-taking and implementations. The Ministry of Home Affairs and Planning Commission have introduced a new scheme of support for research in respect of the scheduled castes funded by the Ministry.

Vision for the Future

The late Dr. J P. Naik, whose tireless striving for relevance in our educational system led to today's seminar, was one of the earliest apostles of equality in educational opportunities. The educational backwardness and social handicaps of the scheduled castes were constant sources of grief to him. I hence hope this seminar will suggest concrete action points rather than only indulge in discussion. I would like to offer a few suggestions for your consideration.

Swami Vivekananda touched the core of the educational approach needed for scheduled castes and other poorer sections of the society when he suggested: If the poor cannot come to receive education, education itself must go to the poor Unfortunately, this advice has not been followed. As a result, we find that all our efforts in the last 30 years have been able to solve only a small proportion of the problem. "More of the same" approach alone in my view will not take us far. This is particularly so because of rapid population growth which makes it necessary "to run twice as fast even to stand where we are".

If "more of the same" approach is not adequate, what other steps are needed ? To provide remedies to specific maladies, we need to undertake a location-specific, micro-level malady-remedy analysis. The specific maladies impeding educational advancement will have to be identified for each sub-group of the broad group of people termed 'scheduled castes'. What are the major components of such a malady-remedy analysis ? These can be classified under ecological, economic and educational criteria.

(*a*) *Ecological handicaps :* The ecological causes of educational problems have not received the attention they deserve. For example, the locational isolation in villages, poor environmental sanitation, lack of clean drinking water, poor health care, inability to get accommodation in towns and all other handicaps arising from the poverty and misery of the environment contribute

to educational backwardness. The ecology of education in respect of scheduled castes hence needs careful study.

(*b*) *Economic handicaps* . These are better understood and particularly affect female education. Innovative procedures are, however, yet to be developed for attracting and retaining girls in schools. I feel that a special 'food for learning' programme should be started in order to attract Harijan girls to schools, particularly in areas where they hardly attend school now. Such a programme will involve the provision of food-grains, edible oil and milk powder to girl students belonging to the poor scheduled caste families if they regularly attend school. Economic motivation is a powerful instrument of altitudinal change with respect to education

In addition to a special 'food for learning' programme, other economic programmes like the Integrated Rural Development Programme (IRDP) and the National Rural Employment Programme (NREP) should pay special attention to enabling children of scheduled castes families to go to school, through the organization of creches. Immediately, communities like chandalas, Mala Masthi, Dogi, Dome, Dhed, Godagali, etc. where the literacy percentage is nearly zero, need special attention.

Non-formal educational programme, particularly institutions like Krishi Vigyan Kendra and Van Vigyan Kendras, where learning is by doing will have to be specially tailored to suit the needs of scheduled caste children.

(*c*) *Educational techniques :* 'Meadow' and 'mobile school', the use of drama as a method of fostering the power of concentration and oral articulation of thought and the proper use of the course-credit and semester system of organization of teaching—all deserve attention and adoption. The pedagogic problems associated with 'first generation learners' have not received serious attention so far. Scholarships and relaxation in admission rules alone will not help first generation learners. Methods of instilling the power of concentration have not all received the attention they require. Therefore, in developing educational techniques for scheduled caste children, the specific requirements of children from illiterate parents need to be kept in view. Educational procedures should aim at reaching children wherever they are and to retaining those who have joined school. At the university stage, the course-credit system of curriculum organization will help them to overcome the handicaps in the early education and prepare them for fulfilling future aspirations.

Thus, the ecological, economic and methodological problems associated with educational programmes for children from scheduled caste families need indepth study. A few action research programmes need to be initiated in order to get answers for problems such as the most effective method of promoting girl education. Will a 'food for learning' programme help to retain girls in schools ? Will drama as a medium of education help to promote the power of concentration ? We need answers to such questions.

The late Dr. J P. Naik's dream of making this seminar come to grips with

the real issues involved in the education of socially and economicall y handicapped sections of our population which become a reality only if we are able to consider in depth the ecological, economic and methodological aspects of the educational development of scheduled castes.

TABLE 6

SIXTH PLAN (1980-85) OUTLAYS FOR EDUCATIONAL DEVELOPMENT OF SCHEDULED CASTES UNDER SCHEDULED CASTES SPECIAL COMPONENT PLAN—STATE SECTOR

(Rs. in crores)

States	*State's Education Plan*	*Quantified Outlay for SCP for SCs (Education Sector)*
1. Andhra Pradesh	73.00	14.26
2 Assam	87.50	1.78
3. Bihar	154.00	30.80
4. Gujarat	61.60	6 16
5. Haryana	63.37	Not yet furnished
6. Himachal Pradesh	17.75	4.20
7. Karnataka	57.60	8.50
8. Kerala	50.20	0.56
9. Madhya Pradesh	104.50	18.44
10 Maharashtra	132.80	7.84
11. Manipur	18.00	0.45*
12 Orissa	54.60	10.56
13. Punjab	56.00	0.07
14. Rajasthan	101.25	11.13
15. Sikkim	9.30	0.07
16. Tamil Nadu	93.00	21.40
17. Tripura	15.50	0.92*
18. Uttar Pradesh	138.73	32,00
19. West Bengal	275.00	46.12
Union Territories		
1. Chandigarh	16.00	0.57
2. Delhi	73.50	11.47
3. Pondicherry	6.90	1.06
	1660.10**	228.36

* Tentative

** States/UTs not having Special Component Plan for Scheduled Castes have been excluded. □

Physical Education and Sports Programming in Schools

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PHYSICAL EDUCATION and sports have become an important part of our culture. The impact of sports on a society appears to be far greater than most physical educators have realized. In fact, the physical education is that integral part of total education which contributes to the development of the individual through the medium of physical activity. It may be defined as the school-centred programme of physical activities.

The term 'physical education' refers to the process of education that concerns activities which develop and maintain the human body. The word 'physical' refers to the body. It is often used in reference to various bodily characteristics such as physical strength, development and prowess, health and apearance. It refers to the body as contrary to the mind. When an individual is playing a game, running, swimming, working out on the parallel bars, skating or performing in any of the physical activities, education is taking place at the same time. This education may be conducive to the enrichment of the individual's life or it may be detrimental. It may be a satisfying experience or it may be an unhappy one.

Physical education has an important role to play in our educational system. Many physical educators have become aware of the contribution which they can make towards the development of the individual by providing opportunities for him for good sports experiences. Through a well-directed physical education programme, young people develop skills for the leisure time, engage in activities conducive to healthy living, develop socially and contribute to their physical and mental health.

Aims of Physical Education Programme

Physical education can contribute to the education of the school boys and girls in various ways. These include activities for (*i*) the improvement of the physical

fitness, (*ii*) the development of motor skills, (*iii*) experiences for the enhancement of social efficiency, (*iv*) development of character and personality, and (*v*) teaching of special skills for desirable leisure-time use. While many physical activities can be utilized for more than one purpose, no single activity can contribute equally well to all the objectives and the manner in which the activity is presented will vary according to the purpose sought by its use.

Bookwalter and Vanderzwaag (1969) have stated that the aim of physical education is the optimum development, integration, and adjustment physically, mentally and socially of the individual through guided instruction and participation in selected total body sports, rhythmic and gymnastic activities conducted according to social and hygienic standards. Seidel and Resick (1972) have also concluded that the objectives of the school programme of physical education fall into five categories: (*i*) organic development and physical fitness, (*ii*) skill development, (*iii*) emotional health, (*iv*) mental development and (*v*) social development. They also add that the development of a positive self-concept, acceptance as a member of team, increased enjoyment of sports activities and the ability to relax and forget study pressures can also be considered worthwhile objectives.

Rosenswieg (1969) identified the following ten objectives of physical education : (*i*) Organic vigour, (*ii*) democratic values, (*iii*) social competency, (*iv*) cultural appreciation, (*v*) leisure-time activities, (*vi*) self-relization, (*vii*) mental development, (*viii*) emotional stability, (*ix*) neuro-muscular skills, and (*x*) spiritual and moral strength.

Physical Activity as the Medium of Learning

Children learn and develop as they run, ride the merry-go-round, fight with their pears and classmates, drive bicycle as they learn by watching television, reading stories and attending classes. They are also educated as they run, leap, dodge, swing and balance. They grow and mature as they play with others, walk by themselves, build sand-houses and perform some funny experiments "Learning takes place not only through vigorous and extensive movement but also by studying, discussing and contemplating movement" (Frost 1975) Hence physical education includes all the changes that occur in individuals through the medium of physical activity.

Selection and Classification of Physical Activities

Physical education activities in the schools should be selected on the basis of the nature, needs, capacities and interests of the students. Some factors have to be taken into consideration such as (*i*) facilities available, (*ii*) capabilities of the staff, (*iii*) equipment needed, (*iv*) time allotted for physical education, (*v*) climate and geographical consideration, and (*vi*) budgetary resources. The physical activities require time, planning, effort and persistence on the part of the physical education There are, however, many examples of outstanding physical education programmes which have been developed over a period of years through the intelligent, patient and untiring efforts of the dedicated teachers and administrators.

1. *Nature of students* : Age, sex, personality, ethnic and cultural background and inherited characteristics of students should be considered while selecting physical activities for the school children. It is obvious that what is suitable for a six-year-old boy may not be right for a ten-year boy and that what seems good to a girl of 10-year-old may not interest her when she is

sixteen. Boys and girls also differ in many respects, though they have many characteristics in common. The differences are more apparent at some ages.

2. *Needs of students* · Children have physiological, psychological and sociological needs. They require security, love, praise and a feeling of self-worth, as much as they want food and water. But the needs of individuals are not the same throughout life. The early years should include activities which will assist individuals to keep fit and vigorous in later life Hence the sports activities should cater to the different needs of the children

3. *Capacities and limitations*. There are wide differences in the capacities of individuals. Each person's limitations and abilities change greatly as the years pass Attention should be given to every individual's limitations at each age level

4. *Interest of students*. Psychologists know that children and adult learn faster when they are highly motivated. The degree of motivation is related to the individual's interest. Readiness of the students should receive consideration when selecting activities and planning their physical education programme. Sports that attract their close friends seem most desirable to many individuals. A friend's participation in an activity will motivate many to choose the same one.

Programme at the Primary Level

The programme of physical education at the primary school level has undergone a lot of change now. Previously, physical activities were not given any importance but today they are a regular part of the school-day Traditionally the classroom teacher was responsible for physical education, but today increasing emphasis is placed on the specialized training and in many instances a physical education instructor conducts the programme Years ago there was little appreciation of physical education as a contributing factor to scholastic achievement but today it is considered an integral part of the total education programme Years ago physical education was considered to be a subject that had no relationship to other subjects in the curriculum, but today there is an inter-disciplinary emphasis that includes subjects such as art, music and mathematics.

Teaching in the primary school today is a challange. This is the time when a solid foundation of movement experiences can be provided to children as the base for future development and accomplishment in various forms of the physical activities including sports. Movement experiences are being recognized as educationally desirable in the early life of the child. In addition to helping children scholastically, movement experiences have many social benefits, such as inter-personal relations and a recognition of individual differences. Furthermore, it is through movement that the children express themselves, are creative, develop a positive self-image and gain a better understanding of their physical selves. Children at this stage need numerous physical experiences using basic skills involved in crawling, running and jumping, skipping, hooping, dodging, bending, twisting, rolling, hanging, climbing, kicking, carrying, pulling, and balancing. It is through such movement experiences that young children explore, develop and grow in a meaningful manner.

Children in the lower primary classes need vigorous large muscles activity. They need to run, chase, climb and swing They are also ready to throw and catch balls, climb through and jump over the ropes, mimic and dance, explore and create. As children advance towards upper primary level, they develop an increasing number of fine and more manipulative skills. They dribble and pass basketball, they swing

bats and control with the hockey sticks, they throw, kick and field football, they handle their bodies on gymnastic apparatus, they become more and more concerned about others and want to play and work in groups. They are challenged by competition and love to excel

Programme at Middle School Level

The middle school is designed to provide an educational programme for pre-adolescents and early adolescents that begins where the school for earlier childhood ends and continues to the school for adolescents. Children in the middle school generally range from 10-14 years Middle schools usually have classes from the fifth through eight

The physical education programme in the middle school is part of the developmental programme that builds on the movement experiences of earlier grades. Such a programme is based on children's growth and development characteristics and the physical activities that meet their needs at these particular stages of development. Research shows that the physical growth which takes place in children during this period of transition represents a most vital educational concern and cannot be ignored. The curriculum should provide for an interrelationship in the areas of fine arts, physical education, social studies and practical subjects. The physical education programme has evolved from the overall learning approach and its goals include the following :

1. Instilling an appreciation for enjoyment of physical activity
2. Developing motor patterns that will complement a student's self-concept.
3. Helping students accept their limitations and expand to their greatest potentialities.
4. Encouraging creativity and providing social experiences.

The primary school programme provided activities for adequate organic development, fundamental movement patterns and an introduction to a number of rhythmic exercises, gymnastic activities and sports. Hence the middle school programme should emphasize a broad variety of physical education activities There should be stress on demanding and challenging experiences, because students of this age should have many interpersonal experiences and need to develop social understanding The team should be an important part of the programme. Students should be exposed to individual and dual sports, because some will not continue their education beyond 16. Camping and other outdoor experiences should be included for the same reason The self-testing activities like gymnastics, etc. are appropriate at this stage. The challenge of controlling the body in many different ways is appealing and such activity takes to all-round development of the personality of the child. They are still flexible and pliable enough to learn gymnastic skills which require these qualities. Track and field activities can also be emphasized at this period, especially the short and middle distance races, etc Boys and girls should be separated for contact activities at this age level, due to disparity between the sexes. Students at this age level are very much interested in swimming and diving as they are ready for life-saving and other water sports. It is a well-known fact that many swimmers attain their best competitive scores during this period

The activities at this stage must be selected with care because of the physiological nature of this age-group. Students at this level are in a period of rapid growth and find it difficult to coordinate their actions. Hence there must be careful super-

vision by qualified personnel of all physical education activities They should be sympathetic to the problems of boys and girls and should be able to guide children successfully during this formative period. They should understand the needs, interests and capacities of children and should realize that they may be doing some exceptional service to students during this time when they are planning for the future.

Programme at High School Level

After a reasonably sound programme of physical education at the primary and middle school levels, the high school student is ready for more specialization, more lifetime sports, and a higher level of skill development The high school student should have more choice of activities, should be provided more opportunities for leadership and should be presented with a number of new and challenging experiences. He is also ready and eager for adventure.

The high school programme of physical education should be the responsibility of specialized persons. During this period, stress is laid on team games of higher organizations and on dual and individual games It is also during this period that students should develop sufficient skill so that when they leave school they will have the necessary fundamental skill, the desire and the knowledge to participate successfully and enjoyably. The competitive element is prominent in high school students and the more highly organized games, intramural sports and field games offer opportunities for students to give vent to this instinct. However, the physical education teacher, through careful supervision and guidance must ensure that the activity is not too strenuous and that excessive demands are not placed on the participants.

The programme of physical activities in high school includes such activites as basketball, field hockey, volleyball, track-field activities, football, swimming, archery, badminton, cricket, tennis, etc. In some of the public and model schools the advantages for a well-sounded and successful physical education programme are much greater Because of small enrolments, beautiful athletics fields, spacious gymnasia and swimming pools, these schools may offer a programme that is in many ways superior to those found in many ordinary schools.

The high school years begin the age of emancipation for most individuals The urge to break away from parental control, the desire to be recognized for themselves as individuals, the eagerness to determine their own life styles and the need to be involved with their peers are particularly evident at this age Rebellion against authority is also strong in many young students about this time. During the high school years, many students reach their peak form as far as their ability to perform is concerned. They generally have a strong sense of loyalty, a tendency towards hero-worship and a very competitive spirit. Hence team-sports, individual and dual sports like aquatics, gymnastics, dance and outdoor activities have a place in the high school programme Many students benefit mostly by participation in such activities

In order to make physical education programme in schools successful, the most important thing is that physical activities and experiences should be meaningful to the students. If there is no challenge, if the activities are devoid of fun and joy, if there is no sharing of adventure and triumph, and if the programme is merely a repetition of their earlier physical education, students cannot be expected to maintain their interest and enthusiasm. They must look upon their physical education programme as significant and important to their individual self-realization. □

A New Grammar of English

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THERE ARE three parts of this article. Part I deals with the parts of speech where an attempt has been made to establish that the traditional definitions are misleading and that noun is a main word and the rest are its phrases. Part II discusses the problems of deep grammar, and in Part III tense is another important topic that has been also refined and redesignated.

I. Parts of Speech

Noun has been defined as a naming word. 'Red' or 'white' is also a name of colour; yet it is not used as noun normally. Similarly, noun is also used in place of noun, such as the following :

Mary and Sonia go to library.
The two girls go to library.

So noun and other words can be also used in place of noun. Likewise, adjective has been also handled inadequately. In 'Mary's car is new" 'Mary's' qualifies 'car' and adds something to its meaning, yet 'Mary's' is not an adjective, it's a determiner. Other definitions of the 'parts of speech' are not very comprehensive in traditional grammar, for example, verb has been defined as the words used for predicating. However, all words used for predicating are not really verbs. Verb is a headword in the predicate as noun is a headword in the subject. Further, adverb has been defined as a word that modifies every word except noun and pronoun; but in the sentence, 'Even Robert or he cannot do it', 'even' modifies even the noun (Robert) or the pronoun (he). Also, preposition doesn't only establish relationship between verb and noun in the predicate as in 'He went out to the sea' but also shows direction, position, location and dimension as specified to time and space. Here 'to' is not only establishing relationship between 'went out' and 'the sea' but also showing the direction. Moreover, it precedes noun except adverbial particle. So it functions like a determiner and signals the coming of noun. If it is not stressed and is followed by noun it is preposition; but if it is stressed and not followed by noun it is

adverb as in 'come in'. The categorization is changed if it is stressed. Moreover, in 'come into my office' there is one dimension and in 'stay in my house' there is another dimension in space. The handling of conjunction also is not satisfying Even an adverb (however, moreover), a connector (still, also) and a clause coordinator are connection words, but all these terms have to be distinguished. A clause coordinator is generally restricted to initial position as in 'John plays the guitar and his sister plays the piano'. Here 'and' is restricted to initial position in a clause; but it is not true of most conjuncts, i.e moreover, as in 'John plays the guitar and his sister, moreover, plays the piano'. The last though not the least important individual word is interjection. What is striking about it is that words and complete statements sometimes function as interjection. Also, it is used as a sort of stammering word, to prepare the way for the coming utterance as in : 'Oh Lord'. So 'Oh Lord' determines the syntactic construction that follows. It is, therefore, not superimposed on the 'parts of speech' system. No other word expresses a sense of sorrow, pleasure, fear and excitement So it is wrong to say that it is not an integral part of the 'part of speech'.

Noun

We have thus found that the traditional approach to the 'parts of speech' is not tenable. However, other approaches are also not acceptable. In form-classes noun, adjective, verb and adverb are put together under one head and in NP and VP noun and verb are also a mixed categorization, although they are for a different purpose. But what I mean is that noun, adjective, verb, adverb, NP and VP are not coordinated; nor can they be considered at the same level. All of them should not be put together and mixed up, their labelling and categorizations should be different. In a description of a sentence NP+ VP categories are all right; but noun and its phrases, verb and its phrases are required to be described at different levels Moreover, VP includes NP but not the vice versa So the rule is to be rewritten as $S \rightarrow N \rightarrow$, $N_1 + N_2$. Here N_1 stands for determiner that is a noun phrase and N_2 stands for aux and other VP. After 'NP' we can consider NC (noun clause) and after VP, VC (verb clause) should be taken into account.

Noun is a base word and other parts of speech are its phrases. They are not of the same value The position of noun in a sentence reminds us of a court scene where an emperor's arrival is announced loudly and all courtiers take their positions after greeting him. Noun is an emperor; its coming is signalled by determiner and it is stressed; pronoun keeps itself in readiness to be used in its absence for elegance. Adjective qualifies and adverb modifies it. Verb manifests, reflects and extends its inherent property. Preposition as described earlier shows its position, location, direction and dimension. Conjunction joins two nouns or other parts of speech at the same level. Interjection expresses its sense of surprise, fear, etc. So all are helping words

Moreover, noun is a complete word in itself. It stands on its own and doesn't require necessarily a peg to hang on, like other parts of speech. Suppose, we say, 'salt' at the dining table It means 'Bring me salt, please'. Moreover, we call a person by name and don't use the full sentence 'Come here, Mohan'

In addition, noun creates verb in a certain context. Suppose, we say, 'A mango has fallen from a tree'. Here the falling of a mango is not possible unless there is something to fall from; something that falls and something on which it falls. The 'ground',

the 'mango' and the 'tree' are related by 'falling' that is horn in such a situation. So verb has no independent existence from noun

Moreover, one verb is not so close to another verb as noun is to verb, for example, we cannot say, 'He inaugurated Mohan' in place of 'He encouraged Mohan'. But if we say, 'He headached me yesterday', it is not as grave an error as to say 'inaugurated' for 'encouraged', because communicability doesn't break down completely in this sentence. Acceptability and grammaticality are not there; but what we look for more is communicability.

So noun and verb cannot be sharply distinguished. If we say, for example, 'He has already left it refers to the place of departure and if we say, 'He must have reached' it refers to the place of destination, So it is used for noun. Generally, there are two nouns in a sentence—one in the subject and another in the predicate, such as, 'Mohan flies to New York tomorrow'. Here it is not only 'to' that established relationship between 'flies' and 'New York' but 'flies' also related 'Mohan' to New York Apart from linking verb even main verb sometimes links noun with verb.

Moreover, noun is not only a naming word but also a doer and a recipient of action, instrument and the result of the action performed, for example, 'Spicer sharpens a pencil with knife'. Here 'Spicer' is a doer, the 'pencil' is recipient of the action performed and the 'knife' is the means through which it is performed.

All these examples establish the superiority of noun over other parts of speech. Furthermore, noun is little 'prakriti' and verb is like 'Purush' (Purush is inherent in Prakriti—Gita). Let's explain in this way. Verb reflects and extends the inherent property of noun such as the following :

This table polishes well.
This book sells well.
This author sells well.
This house paints well.

Here the properties of the 'table', the 'book' the 'author' and the 'house' help in polishing, selling and painting. Without the help of such inherent properties the verbs cannot function. In fact, verb and adjective are different, still they depend on the property and quality that is inherent in noun. For example, we cannot say, 'walls laugh' or 'trees talk or walk' or 'A colourless green idea sleeps furiously' or 'His height is ten feet' or 'It's a white tomato' or 'He is of two thousand years' because 'laughing' is not an inherent property of the 'walls' nor are 'talking' and 'walking' inherent properties of the 'trees'. Moreover, an 'idea' cannot be 'green' and a 'green' thing cannot be colourless. Also, an idea doesn't 'sleep' and the question of sleeping 'furiously' doesn't arise. Likewise a man cannot be of 'ten feet height' or of 'two thousand years'.

If noun is animate all categories of verbs and adjectives cannot go with it. So it imposes certain restrictions for which there are rules in grammar. Verb is according to the inherent property of noun in both subject and predicate. Suppose we say, 'A window is running in the field'. Here 'running' is neither according to the 'window' nor according to 'the field'. A bird flies in the sky. But if we say 'A bird is flying on the ground' it's not acceptable. Likewise, we cannot say 'A brittle man'. What word will go with what depends largely on the semantic features analysed in a grammar, giving full list of animate, inanimate, human, non-human, adult, non-adult nouns that take certain verbs and adjectives. In grammars of some languages it has been done but not in English, although it is so important. T. Giers has, however.

tried to include semantic features. Even in the use of pronoun the consideration of semantic features is important, such as 'She is a girl'. Here the semantic feature (female) of the 'girl' determines the use of 'she'. If noun is non-human, except country, etc. 'it' is normally used.

So noun presides over all other words in a sentence. Once the string is pulled, form and meaning of the words are logically arranged, syntax being logical arrangement of words and semantics logical arrangement of ideas, for example, if plural words are used no articles are used initially and verbs don't take bound morphemes in the simple present. Moreover, noun covers larger area of meaning and has more connotation than any other word in a dictionary.

Further, man is the most important thing in the world. So is the noun grammar as it occupies the first position in the parts of speech. Since it belongs to an open system it has a greater generative power. By adding morpheme—both bound and free—it generates new words, such as verb-derived nominal or compound nouns 'To do him good is appreciated' or 'Walking is a good exercise'. Moreover, if the second syllable is stressed, it becomes verb, i.e. 'import-im'port. In addition, by adding lots of sentences can be generated, for example :

Man has arm.
Arm has fingers.
Fingers have nails.
Nails need cut.
Cut is done in a saloon.
The saloon is located in the city.
The city has barbers.

Likewise, from a kernel sentence one could have lots of transforms. Furthermore, coming back to semantic component noun is described in a sentence such as 'Sincerity may harm the boy'. Here 'sincerity' is (+ count) (+common) (+abstract) (+form class) Here plus-minus is equal to minus, but common noun has been mentioned in relation to 'the boy' Again, the 'boy' is (+count) (+common) + human) (—adult). 'Harm' in the above sentence can be described as N_2 and 'may' as $N_2.1$. Main verb and model can be described in terms of noun phrases to show that noun is a base word. Model should be also described as SW (structure word).

II Deep Grammar

In deep grammar, base noun, base adjective, base verb and base adverb are considered. Base nouns, such as, cat, dog, man, etc. and verb-derived nouns (nominals) merit our attention here. Derived nouns are less 'nouny' and base nouns are more 'nouny'. Similarly, base adjectives are 'adjectivy', than derived adjectives, such as, 'She is calculating' or 'He is learned'. Adjectivals are less 'adjectivy'. This is true of verb also. Base verbs, such as, go, come, etc. are more 'verby', but verbals, like linking verbs (is, am, etc.), catenatives (He felt wounded or Mary wants to go) or 'He downed the shutters of his shops' or 'She cleared the gate', etc. are less 'verby'. Likewise, base adverbs, i e often, always, etc. which are used before verbs are more 'adverby' than derived adverbs, such as, 'He drove the car slowly' or 'She has done her job nicely'. 'Slow' and 'nice' are adjectives but they are being used here as adverbs. So they are less 'adverby'. When one part of speech is used as another part of speech it possesses less property of that word as it is derived. Some of them look different on the surface, but their deep structure is the same, such as (*i*) He is a slow driver. (*ii*) He drives slowly. 'A slow

driver' and 'drives slowly' are the same. They are on the fuzzy border-line like colour-spectrum in the sentences: (*i*) She is calculating. (*ii*) She is charming. 'Calculating' and 'charming' can be both verbs and adjectives unless they are preceded by the intensifier 'very'. Likewise, 'Flying planes can be dangerous' or 'Visiting guests can be a nuisance' is ambiguous, because 'flying' and 'visiting' can be either adjective or verb. However, they can be disambiguated through description.

Sounds, words and sentences which appear so different on the surface share many classificatory features at the bottom and some of them are different in deep structure; but appear alike on the surface. In deep grammar such problems are sorted out. For example, (*i*) 'John is eager to please', (*ii*) 'John is easy to please' have the same surface structure, but their deep structure is different. The first sentence is in active and the second in passive voice.

Similarly, in the sentences such as 'I persuaded the doctor to treat John', 'I' cannot be transformed into passive retaining the first part but can be transformed So their deep structure is different, although the surface structure is the same.

Likewise, the sentences (*i*) 'They were married last year', (*ii*) 'They were married when I met them last year' have the same surface structure but their deep structure is different as 'married' in (*ii*) is adjectival or statal verb, whereas in (*i*) it is the past participle of the finite verb.

From these examples we can conclude that the sentences exist in deep structure. Take some more examples to prove this thesis of deep grammar :

1. 'They saw him'.
2. 'He was seen'.
3. 'His being seen'.
4. 'For him to have seen'.
5. 'Their seeing him'.

Here the verb 'see' occurs with the same meaning, although the surface form of the verb undergoes many changes. The change of form is only a surface fact and it is not relevant to the deep meaning.

So we can say that the deep grammar is a store-house of a language and the surface grammar is its show-case. In the deep grammar elements of a language are stored, and in the surface grammar they simply happen. Surface is really a 'firing line' and the deep is 'rear'. Such assumptions of formalists give us better insight into language description.

These aspects of grammar were overlooked by traditionalists and structuralists. However, even generativists have generalized instead of confining to the description of one language only. How many of us are really ideal users of English, possessing the knowledge of all the rules of grammar that can account for linguistic phenomena in other language also? As we needed Katyan and Patanjali to interpret and simplify Panini we need someone to make Noam Chomsky less rigorous, less formalized, easier and to incorporate communicative component describing 'processes' of making 'infinite use' of 'finite means'. Such a grammar will have an in-built communicative competence.

III. Tense

Tense can be also considered under the 'deep grammar'. The surface structure of tenses is different, but they denote the same time such as (*i*) He goes tomorrow. (*ii*) He is going tomorrow. (*i*) and (*ii*) have two tenses but they mean almost the same thing. (*i*) is more definite only. Moreover, the present time can be expressed by the use of the present tense, past tense and the

so-called future tense such as: (*iii*) 'He'll be watching the flow of the Ganga for hours everyday; it is in the so-called future tense but it indicates the present time.

Similarly, the past tense also expresses the present time as in (*iv*). If I left by air now, I would be received by my brother in New Delhi at the dinning table this evening. From these examples one concludes that any tense can express any time. Even the present tense indicates the past time as in (*v*) When Akbar comes back to Agra after conquering Gujarat hears that the Gujars have again revolted so he returns to quench the flame of revolt.

What we find here is that the present tense expresses the past time and future time and the future and past tenses also indicate the present time So the surface structure of tenses may be different, but so far as deep structure in terms of indicating time is concerned there is no difference.

However, this labelling is utterly confusing. If any tense can express any time why to attach a particular tense with time. Time is an independent philosophical concept that should not be confused with tense Tense is largely a change of verb form. It doesn't have one-to-one correspondence with time. The present tense, the past tense and the future tense do not necessarily indicate the present, past and future time.

In such a case there is a need for redesignating the tense There are only two tenses in English— (*i*) Tense number one (non-past) and (*ii*) Tense number two (past). There is no future tense in English. It's a well-known fact in modern grammar but I mention it here again, because the people around us are hardly aware of it.

No Future Tense in English

If the future tense is made by using separate words, i.e. 'shall' or 'will' or 'tomorrow' or other adverbials it is not the future tense; because here there is no inside-change of the verb-form as in · go-goes, go-going, kill-killed, eat-eaten, sing-sang, etc. Such changes indicate the change of tense only

Even in other languages of the world the future tense is made by the inside-change of the verb form such as the following ·

Present Future
Je couvre—Je couvrais

Here is an inside-change of the verb form 'ais' to make future tense in French. Similarly, 'Je parle' is in the present tense but it is made the future tense by adding 'rai' as in 'Je parle rai'. Likewise inside-change of the verb-form takes place in Sanskrit, Hindi, Urdu and many other languages of the world such as the following 'Bhawati' has the present tense form in Sanskrit, 'abhawat' is its past tense form and 'bhawishyati' is its future tense form. Tense is changed by adding prefix and suffix. In Hindi and Urdu also there is an inside-change in the verb-form as in 'Jawoonga' to indicate the futue time.

Conclusion

To conclude, it has been established in this article that traditional definitions of the 'parts of speech' are hardly tenable, that noun is a main part of speech and the rest are its phrases, that deep grammar is real grammar and the surface grammar is superfluous in a sense and that tense has different forms to express the same time. So it should be redesignated as Tense No. 1 and Tense No. 2, epistemic tense, such as, 'Yesterday he was coming tomorrow' or deistic tense as in 'He said he will visit us when the weather is fine' are a bit deviant having different sentence constructions but they would be considered under Tense No. 2

according to their verb-forms and not as separate tenses.

The last though not the least is the phonetic component in grammar. In modern grammar the phonetic change is shown, whenever there is a change of form, apart from meaning. Even ancient grammarians, like Panini and Patanjali, considered it as an integral part of grammar. Panini listed categorically the phonemes produced from a particular mouth organ and so arranged it that a short vowel sound is followed by a long vowel sound (See his *Astadhayayee*). Patanjali also says that the grammatical knowledge presupposes the phonetic knowledge (*Mahabhashya*). 'In the Sutra as given in the *Astadhayayee*' : 'अकुह् विसर्जनीया कण्ठ'

Panini describes both vowel and consonant velar phonemes together showing their place of articulation. It has a mathematical abbreviation, and stands for all k—category of phonemes and for (h) only. They are called velar sounds as they are produced from velum.

Chomsky also uses such mathematical abbreviations. A language cannot be analysed through a language, hence metalanguage. Panini's and Chomsky's rules are closely knit and linked up with one another So in this connection it is worthwhile mentioning that Chomsky bears a close resemblance to Panini. Both are generative, transformational, descriptive grammarians who treated syntax, semantics and phonology as integral parts of grammar. They started from initial element and made thereby 'infinite use of finite means', as Whihelm Von Humboldt had said more than a century ago. □

Non-Formal Education and Development

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NON-FORMAL education is usually referred to those systems of education which are organized systems but outside the purview of formal system of education. Non-formal education has been considered as an alternative system to the formal education in the form of part-time education to children who because of very many reasons could not have had entered and got the fruits of formal education. The term 'non-formal education' is a much more broader concept as it has been conceived in two more dimensions, viz. adult education which is purely a literacy programme and agriculture extension activities. The term 'development' is a multi-dimensional concept as it includes various aspects of life, viz. educational, social, economic, political, cultural, and health and sanitary aspects. Development in any society will have to be looked upon from these various angles to understand the total process or to get a gestalt of development, as development in one aspect of life does not necessarily mean the development in other aspects of life. But it has become customary to equate economic development (per capita income) and development in science and technology for overall development in this modern world. However, a man who has little imagination can very well see that development in science, technology and increase in per capita income do not guarantee the overall development of any society or state. For example, the USA has progressed a lot in science and technology, and Kuwait is the country with highest per capita income in the world today.

When one looks into the crime rates, divorce rates, family disorganization, suicides, lack of sociability, too much of self-centredness, neglect of the aged, ethno-

centrism, lack of secular tendencies, rigidities of religion, communistic and authoritative tendencies, use of surplus money for preparing arms, use of science and technology for destructive purposes, one can very well conclude that the term 'development' has to include all other aspects of life, viz. social, political, cultural, health and sanitary, and educational aspects than merely development in science, technology and economic aspect of life As such education in any society has to cater to the development of all aspects of life in all sections of its population (urban, rural, tribal, and other slum communities) and should not restrict itself to literacy and general education alone as is the case in India today. This article, however, is restricted to the discussion of the efficiency of non-formal education in bringing about development in India today

As far as the functioning of the part-time educational institution in India today is concerned, it can be said that it has not yet attained the state of a national movement unlike in many advanced countries. The part-time education, which originated in order to satisfy the Article 45 of the Directive Principles of the Constitution has neither been adopted nor being implemented on a large scale in the country, although much is spoken on it in all important educational seminars, conferences, symposia, by educationists and planners. The concept of part-time education has been very well accepted at least by educationists and planners as an alternate form to formal education. But efforts to put the same into practice on a war-footing basis are lacking The people at the planning level have not yet thought of as to how part-time education courses should be organized and still they are in the thinking process. Educational problems of scheduled castes/tribes, backward castes and slum children have not yet been understood from cultural, anthropological and economic perspectives, because of which part-time education has not made satisfactory headway even after 34 years of independence. For the children of the weaker sections of society general education in part-time courses should be of a smaller duration (2 to 3 years), followed by suitable vocations (the nature and the type of vocations should be determined by the local needs), so that parents and children can see and get immediate value of education This is because economic and cultural values in such societies outweigh the educational values. In other words, part-time educational courses should be flexible enough to cater to the needs of all sections of population and they should not be just general courses by which no progress can be made as is in India today.

The same is the case with regard to adult education programmes in the whole country. Although India attained independence some 34 years ago, only stray attempts are being made that too only from October 1977 in the name of NAEP. Adult education has not yet been linked up with the realities of life of different communities, unlike in many advanced nations of the world, and it is only a literacy programme even now Further adult education programmes are being conducted in an isolated fashion from other development activities and as such they are not in a position to make the general public aware of the deferred values of education. Because of all these adult education has not been able to make a significant impact on urban, rural, tribal and slum communities. In addition, surveys and experimental studies have not been undertaken to identify the organization of successful adult education programmes and to evolve suitable strategies for further successful implementation of the programme. Although we have been speaking about the egalitarian way of living

and spreading education through non-formal ways, to prepare the individuals for a democratic way of living, things have remained as they are because of lack of proper planning and implementation.

The agricultural extension activities are not very much different from part-time and adult education programmes, in the sense that they are neither being organized, nor being implemented in a serious way except of course in a few cases here and there in the country. Extension activities have not been extended to other occupations, say industrial occupations, other skilled occupations and as such productivity has been equated with only agricultural productivity Hence only agricultural extension activities have been thought of so far, without making systematic and sustained efforts to cover all types of occupations. In other words, lack of proper vision and perspective in the people who are at the helm of affairs (planning level) has led to the serious problems in the institution of non-formal education, which even if understood, now requires many more years to correct the things. So people at the planning level should plan non-formal educational schemes according to the needs of local and bigger communities (in the broader context the nation). By undertaking exhaustive and extensive surveys in different parts of the country (which has never been done in the history of non-formal education so far) and conducting non formal educational programmes in integration with other developmental programmes, so that there will be no wastage of money which could be further utilized for other productive purposes.

Thus only proper planning and implementation at the committed level can help us to move towards the desired state of modernization. Any improper planning and/or execution will not only fail to bring about development, but will also give rise to a state of aversion in the minds of the people of different communities for such non-formal programmes And in that case the country can hardly hope to succeed in the process of national reconstruction in the decades to come. □

Educational News

Indian education index (1948-78)

The Indian Institute of Education has undertaken a programme to bring writings of Indian education, especially after 1947, under proper bibliographical control to assist researchers and students of education in India Under a joint undertaking of Indian Council of Social Science Research, New Delhi, and the Indian Institute of Education, Pune, the first publication in the series entitled *Indian Education Index* (*1948-78*) has since been brought out. The *Index* is primarily a combined retrospective index to the content of 26 Indian educational journals of long standing published in English language Location of the libraries which maintain files of these journals is also included in the *Indian Education Index* The following is the list of 26 journals covered :

1. Asian Journal of Psychology and Education (Agra)
2. Audio-Visual Education (New Delhi)
3 Education (Lucknow)
4. Education and Psychology Review (Baroda)
5. Education Quarterly (New Delhi)
6. Educational Forum (Delhi)
7. Educational India (Machilipatnam)
8. Educational Miscellany (Agartala)
9. Educational Review (Madras)
10 Educator (Nagpur)
11. Indian Education (Kanpur)
12. Indian Educational Review—A Research Journal (NCERT, New Delhi)
13 Indian Journal of Adult Education (New Delhi)
14. Journal of Education (Calcutta)
15. Journal of Education and Psychology (Vallabh Vidyanagar)
16 Journal of Higher Education (New Delhi)
17. Journal of Indian Education (NCERT, New Delhi)
18. NIE Journal (NCERT, New Delhi (now discontinued)
19. Naya Shikshak (Bikaner)
20 New Frontiers in Education (Delhi)
21. Progress of Education (Pune)
22. Rajasthan Board Journal of Education (Ajmer)
23 Shiksha (Lucknow)
24. Teacher Education (New Delhi)
25. Teaching (Bombay)
26. University Administration (Hyderabad)

Indian Education Index is a comprehensive index to published research articles, whether signed or unsigned, comments, rejoinders, reports of conferences, symposia and round tables, book review articles, obituaries, etc which appeared in the above journals It is a single authoritative source-book of micro-literature produced in India during the last three decades. For the first time all such material, which has not been covered so far by any indexing service or bibliography from India or abroad, is now available at one place in this *Index*.

The main index is in two parts—Subject and Author Index. All items are entered under specific subject headings. Added subject entries have also been given generously Full bibliographical information has been provided in subject and author indices for locating any item expeditiously. Appropriate cross-references have also been provided.

The *Index* is available in one-volume edition and is priced Rs. 450 each copy. Copies are marketed by Manasayan, New Delhi.

Research on Harijan education

THE universalization of primary education has remained a far cry for the Harijan children of Bihar, according to a study conducted by the National Council of Educational Research and Training

The NCERT-sponsored project on 'Educational backwardness of scheduled castes and a need-oriented plan' for their development in its study reveals that despite the facilities of free education, free hostel facilities, scholarships and reservation in services to the members of the scheduled castes, only 54 per cent Harijan families are sending their children in the age-group 6-14 to schools In rural areas only 17 per cent children (as compared to 42 per cent in other castes) reach Class VII and in urban areas about 36 per cent children (58 per cent in other castes) are able to reach that level This is a clear indication of the fact that all attempts to provide universal primary education to the children of scheduled castes has miserably failed.

The respondents have been disfavouring dowry system and caste politics which they think are detrimental to the community. They lay much stress on mass literacy campaign and higher wages for manual labour as the essential conditions for development of their community. Setting up of cottage industries and opportunities for higher earning are also next measures for their development They have developed negative ideas against the officers and leaders who according to them are nothing but exploiters. It means they are ill-treated at every step and, therefore, there is a need of leaders of unfathomable faith in Gandhian philosopoy and devoted officers who can win confidence of the community.

Most of the scheduled caste members prefer job with handsome salary, irrespective of power, status and responsibility. They are least aware of the family planning measures but have positive attitude towards it to check high birth-rate. This goes against the persons involved in family planning programmes who it seems have shown little care to popularize them among the community.

Despite various measures taken by the Centre and the state government it has not been possible to provide full fiscal/economic, political and educational status to the scheduled castes. The causes have been social segregation, illiteracy, poverty, ineffective government machinery and atrocities by the dominant castes. Land distributed to them do not go in their possession.

Strict measures should be taken in this regard. Most of the scheduled caste youths live in the villages and, therefore, it may be suggested that at the block level itself, they should be given training in various skills and a handsome grant may be given to them to establish village industries.

In order to eradicate illiteracy and remove educational backwardness the first step would be to have a plan for a successful non-formal education programme through which they may be given functional literacy and training in the development of various skills for social and economic growth.

The British can't add

THREE out of 10 British adults cannot perform simple arithmetic, according to two surveys released in February by the Cockcroft Committee, reports *New Wave* (14 March 1982). Forty-five per cent cannot read a railway schedule, and 60 per cent do not understand the concept of inflation. Gallop polls were commissioned to perform another survey after these surprising results, which were reconfirmed

The British journal *Education* reports that so many adults were afraid of mathematics that half of those approached refused to be interviewed at all

Primary education in West Bengal

A STUDY conducted by Prof. H. B. Majumdar titled 'Gaps in primary education in rural areas of West Bengal' reveals that like many other parts of India universalization of primary education in West Bengal is also lagging behind. Not

The Overworked Teachers (?)

IN VIEW of the general complaints by teachers that their claims for better emoluments are being denied we reproduce a table sent to *Femina* (Feb 8-22, 1982) in the form of a letter by Sri Damodar Agarwal :

From March 16 to July 15—no teaching	—	155 days
Autumn Vacation	—	15 days
Winter Vacation	—	15 days
Gazetted Holidays between July-March	—	8 days
Sundays : July-March	—	32 days
College Holidays, Sports, etc.	—	5 days
Casual Leave	—	10 days
Earned Leave	—	10 days
Working Days—116	Holidays —	219 days

only 100 per cent enrolment at the lower primary stage has not been possible even the provision for schooling has not matched the expected targets. Consequently, the enrolment varies from 57.5 to 80 per cent with an average of 69 per cent. In the case of girls the average is 59.10 per cent only whereas the percentage of boys' enrolment is 78.8. Once again the West Bengal follows the national pattern. The study also reveals that drop-out rate is 27.04 per cent which means that around 27 children out of 100 leave the school before the completion of their studies. The major emphasis of the study lies in stressing on the task of filling gaps like, between school-going population and enrolment, between enrolment and retention, between teachers' expectations and pupils' achievement, etc

NEWS FROM FIELD UNITS

Seminar on vocationalization of education at intermediate stage

THIS seminar was conducted (25 March 1982) on the recommendation of the Programme Advisory Committee of the Patna Field Unit of NCERT with the main objective of creating an awareness on 'Vocationalization of education at the intermediate (plus two) stage' among the high level functionaries of vocation and education establishments in the state headquarters. It needs hardly emphasis that in our national policy on education vocationalization at the 'plus two stage' has been considered a very important step in improving quality of education and bringing in a change of attitude among the educated youth. Somehow the idea is yet to take the form of popular consciousness and a felt need in Bihar Important conclusions which emerged out of the discussion are presented below in brief.

1. It was suggested that there is need for constituting a State Council of Vocational Education by the Government of Bihar as an apex body to initiate action on ways of vocationalization at the plus two stage. This body should take the responsibility to coordinate, guide and advise the Bihar Intermediate Education Council on different aspects of vocationalization.

2. The group agreed with the view that there should be no duplication of courses between the existing vocational institutions like ITIs/polytechnics and intermediate colleges. It was also agreed that there are quite a good number of vocational courses left out by the ITIs, etc. which need to be identified.

3. It was felt that proper linkage will have to be developed with the vocational departments and potential employers to assess the employment potentials for different categories of vocationally trained persons. These bodies should be able to suggest the type of technicians they are in need of but are not available at present. They may be involved in formulating courses of studies in vocational areas by the curriculum committee.

4. Educational survey as suggested by the Review Committee (Learning To Do), 1978 was considered essential to get a clear picture of the existing and projected occupations which have potentiality for employment of vocationally educated youth.

5. While exact nature of courses and their offerings will have to be decided by the curriculum bodies and related education councils, the question of terminal character of vocational courses was discussed at length. Recognizing that ultimate success of vocationalization of education lies in promoting terminal nature of the course, the

idea should not be confused with treating it as a dead end of educational growth for those who join the vocational stream. Opening matching courses at tertiary stage in a few selected institutions may go a long way in fulfilling the aspirations of those who want to go for higher specialization in the line of their interest.

6. Various suggestions on kind of teachers to be employed for teaching vocational courses at the plus-two stage in the light of what is contained in the national document and what some forerunning stages are doing were discussed. It was felt that each specialized vocational unit at the plus-two stage should have a vocationally qualified regular full-time teacher. The unit will also need some part-time teachers who could be drawn from the community for the nearby institutions.

7. The group felt that there was total dearth of literature on this subject. Preparation of instructional materials should be the responsibility of NCERT in the beginning or till such period as the state is able to develop its own machinery to do so.

The group unanimously agreed that the idea of vocationalization of education at the plus-two stage has still to catch the minds of people of Bihar. Even well-educated persons are not aware of the national thinking on this issue. An environment for discussion, education and propagation of the idea has to be created before we hope the idea to be accepted. The NCERT/SECRT/Bihar Intermediate Education Council, each in its own way, has to carry the idea forward through its media of communications. The intricacies of difference between vocational education through intermediate college channel and vocational training through existing ITI, etc. have to be explained clearly. How vocationalization of education is a superior idea to cover modern trends in educational developments all over the world, has got to be spelt out clearly. The group proposed to have similar sessions with principals of intermediate colleges and other education officials to stimulate their thinking.

Problems of scheduled castes education

THE Indian Institute of Education, Pune organized the National Seminar on Educational Problems of the Scheduled Castes at Pune on 30 and 31 January 1982 with a view to prepare perspective plan for the development of education of the scheduled castes over the next two decades—1981-2000. This project was formally started by the late Shri J.P. Naik with the idea to gather social scientists, thinkers and officials to identify and deliberate on the crucial problems pertaining to the education of the scheduled castes so as to give a more meaningful direction to the research in this field. Shri Naik had two definite views on this issue :

1. There has been no adequate research on the educational and other problems of the scheduled castes and far too little in comparison with what the country is doing on the sheduled tribes
2. Unless this research is properly planned and promoted it would not be possible to formulate and implement proper policies for the welfare of the scheduled castes.

Dr. M.S. Swaminathan, Senior Member of the Planning Commission who delivered the keynote address said that it is Shri Naik's tireless striving for relevance in our educational system that has surely led to today's seminar. He was one of the earliest apostles of equality in educational oppor-

tunities. The educational backwardness and social handicaps of the scheduled castes were constant source of grief to him He, hence, hoped that the seminar would suggest concrete action points rather than only indulge in discussion Prof. Swaminathan stressed the history of development of education of scheduled castes during the past three decades and asserted that a good deal was done in the direction although much is still to be done. He gave extensive details to substantiate his views and wanted this seminar to plan such action plans as would give a right direction for the planning and conducting of research in investigating the problems of the education of scheduled castes. He described the social and economic picture of scheduled castes in detail stating how even after three and odd decades of independence the scheduled castes are the direct victims of 'untouchability' and suffer from the 'startling phantom of silent hostility'. According to him this was extraordinary type of barrier in their advancement. He compared the literacy percentage of SC, which was 14.7 in 1971 with all India percentage of 33.1 for the rest of the community excluding SC and ST.

Prominent among those who attended the national seminar were Prof. Deodatta Dhabholkar, Ex-Vice-Chancellor, Pune University, Prof. A.R. Kamat, Prof. M P. Rege, Director of IIE, Prof Sachchidanand, Dr. Vilas Wagh, Shri Krishnan, Jt. Secretary in the Ministry of Home Affairs, New Delhi. During the four sittings the participants were involved in animated discussion on the problems of education of SC. The consensus that emerged, centred round the theme that although enough has been done a good deal is required to be done and a continuous effective effort is necessary to achieve tangible results in this regard. It was also considered expedient to organize a couple of regional conferences in the immediate future so that a comprehensive research programme could be drawn with IIE, Pune, acting as principal coordinator

Education and rural development

A NATIONAL seminar on 'education and rural development' was held at the Indian Institute of Education, Pune from 19 to 21 February 1982. In his inaugural address Prof. Lakdawala analysed the various facets of education and said that education was a comprehensive field which cannot be demarked. Adult education is closely linked with the main theme of education The seminar was initiated to a process of thinking on the problems related to the main theme. In all 17 papers were presented during the course of three days. The themes were education and rural development, socio-political context of education and rural development, inequality in rural education : a statistical profile, working of the rural institutions and the role of education in adapting them for social and economic change and education and rural development · an agenda for research The papers were read, discussed and an attempt was made to arrive at consensus. It was realized that there is inequality in education. The members discussed at length the present practice of solving the problems of rural India by the urban models. The various myths associated with the rural-urban inequalities were taken up for a thorough discussion.

Orientation course in science in Marathwada region

AN ORIENTATION course in science—mathematics, physics, biology and che-

mistry for the +2 teachers of science—unit (NCERT), Pune in collaboration with the Board of Secondary and Higher Secondary Education, M S at Aurangabad from 4 to 6 February 1982. As the first part of this orientation course the Secondary and Higher Secondary Board prepared the content course in all the four science subjects in a workshop held from 7 to 9 January 1982 at the Board's office at Pune. This was done with a view to identify the 'graded difficult units' in each of the four subjects and reinforce them from the point of view of content and pedagogy. The course at Aurangabad emphasized on the need for selecting the right type of method and tools to improve teaching The participants were also exposed to the 'new' in content and its significance in developing the indepth understanding of the subject as a whole This was particularly necessary for a better appreciation of facts and principles involved by students.

Fourth all India SRC directors' conference

THE Fourth All India Conference of Directors of State Resourse Centres was held at the Indian Institute of Education, Pune from 3 to 6 February 1982. In his inaugural address Mr. Ramamoorthi, Joint Secretary, Ministry of Education and Social Welfare, said that it had not been possible to hold an all India level conference of SRCs for the last three years. One of the most important reasons was that the adult education programme has passed through a period of animation and this had also given opportunity to people to have reappraisal of the programme as it was operating. Now since this programme has been included in the minimum needs programme of our Sixth Five Year Plan as well as in the new 20-point programme, it has become necessary to find ways and means of accelarating this programme In view of this favourable development it was important to hold this conference at this juncture to review the mechanism of resource support to adult education programme. The conference of SRCs attempted to achieve the following objectives :

1. To identify the gaps in the different areas of resource support to the adult education programme and to discuss ways and means of bridging them
2. To examine the administrative and financial structure of the SRCs from the point of view of making them more effective to meet the new demands and challenges of the adult education programme.
3. To discuss as to how the SRCs have to respond to the conclusion of the adult education programme in the minimum needs programme of the country as well as in the 20-point programme of the Prime Minister
4. To share experiences in order to identify the strong points of different SRCs with a view to learn from other's experiences.

The programme was conducted in 12 sessions, each session devoting itself to specific problems and issues related to SRCs. The officers of the Ministry/Directorate presented key issues in a plenary session while the group work was mainly meant to find possible realistic solutions to the issues raised in the plenary sessions. On the basis of the reports received from the groups, concrete recommendations/suggestions were formulated for action on the part of the Directorate, State Governments, SRCs and other concerned agencies. The result of the deliberations and discussions are summed up below :

1. The SRCs have made significant contribution in providing technical support to the adult education programme, viz. development of curriculum, production of teaching and learning materials and in the training of project officers, supervisors, etc.
2. There is a need to produce more material reflecting the component of functionality and awareness.
3. Graded materials for post-literacy programme need to be produced and made available as early as possible.
4. The training capabilities need to be strengthened especially for providing support to the post-literacy programme and in view of involvement of the students and voluntary agencies in near future in a big way.
5. Steps should be taken to undertake action-oriented research.
6. SRCs need to develop motivational and promotional materials including use of folk and traditional media.
7. Steps should be taken to improve the system of learners' evaluation and to determine the parameters for measuring the level of social awareness and functionality.
8. The inclusion of areas of national concern, namely population education, environmental education and national integration should be encouraged in the basic literacy material training programmes as well as in post-literacy material for adult education.
9. There is need to make necessary arrangements for the orientation and training of the functionaries of the various State Resource Centres in their respective areas of responsibilities.
10. Opportunities should be provided for greater interaction among different SRCs in a regular and systematic way.

In all the 28 districts of Maharashtra, twelve thousand adult education centres, attended by about four lakhs of adults from rural, urban and tribal areas and cutting across all castes, communities and occupations are being operated, the emphasis being more on women, scheduled castes, scheduled tribes and on the population below the poverty line. Material for the training of functionaries has been produced with great care while production of literature suited to neo-literates has also received the attention it deserves. Training activity in the State has been quite strong. Practically 95 per cent of adult education programme functionaries from the rank of the supervisiors and above, have now been trained.

Open school system in Tamil Nadu

THE government have set up a high power committee, under the Chairmanship of Dr. K Venkatasubramanian, Director of School Education, to work out operational strategies for introducing the open school system in the state. The open school will provide an alternative system of education and help drop-outs to continue their studies up to the school-leaving level without attending a regular school. Working adults and housewives will benefit by this scheme. The CBSE, New Delhi is already operating an open school and its Director, Dr. O.S. Dewal, will also be one of the members of the Tamil Nadu Committee. □

Book Reviews

Education and Political Culture in India : The Limits of Schooling System and Political Socialization. Ehsanul Haq. Sterling, New Delhi, 1981, Pp. 174. Price : Rs 60

THE BOOK under review is an addition to the existing literature, especially in the sociology of education The book based on the author's doctoral work submitted to Jawaharlal Nehru University explores a new area which was not earlier studied properly in India. Prof. S C. Dube, an eminent sociologist, has very ably mentioned the salient features and limitations of the study in the foreword of the book

The book aims at a comparative analysis of the sources and consequences of political socialization of school children. It assumes that the stratified existential conditions both at the family and the school exert a powerful influence on the political orientations and, therefore, the consequences are highly differentiated with a serious implication for the democratic political culture of our society based on democratic principles. The entire study is based on 600 respondents of different socio-economic classes and different representative schools from three broad categories of schools in Delhi—government schools, aided schools and public schools. The data collected through questionnaire, interview schedule and observation has been cross-tabulated in order to examine the effect of factors such as educational, length of teaching experience, rural-urban, age, caste, etc. The content analysis technique has also been used to examine the relevance of school textbooks to the values enshrined in the Constitution of India.

Dr Haq has very clearly brought out in his study the differential in political orientations as a result of a hierarchical socio-political structure and a hierarchical political culture in India He finds that "the textbooks are of less consequence. The school milieu and the teachers are important but the kind of school one goes to is determined by the family background. The kind of mass-media exposure too is determined by the family. This implies that the family is the most important source of developing political orientations. The school which has a

limited role to play in a secondary institution which reinforces what family, the primary institution does" (p. 152). In other words, both the family and the school as major sources of making students politically aware, committed and participant are responsible for differentiated emerging patterns of political orientation among the school boys. It is on the basis of these findings that the author interprets in a systematic manner the different role-types and typologies of students, such as, 'inarticulate-militant' and 'articulate-moderate', based on different levels of political awareness and participation which are attributed to different socio-economic conditions representing the mass and elite cultures of our society (pp. 153-158). This pattern shows the gap between the two which tends to reinforce the existing hierarchical political cultures and prevents the essential unity between them. It is at this point that the study has certain policy-making implications. The author suggests that at present, the only alternative to evolve an integrated democratic culture is to restructure the existing dualistic pattern of schooling catering to the rich and privileged on the one hand and the poor and the deprived on the other.

Thus, the book has taken into account a necessary area of enquiry without any intention of generalization. However, the study along with its merits has its own limitations. For instance, the study has not very precisely shown the exact contribution of various sources This cannot properly be done unless some other methods, comparatively more sophisticated such as multivariate, are used in order to examine the relative value of various agencies of political socialization. Secondly, how the school textbooks have been analysed and scores given are not very clear. Thirdly, the study has not taken into account the result of cross-pressed political socialization. But the study as a whole is thought-provoking. It opens new vistas for further sociological investigation and research in this area

R. GOSWAMI

The Handicapped Student in the Regular Classroom. Bill R. Gearheart, Mel W Weishahn The C V. Mosby Company, St Louis, Missouri, 1980, pp. 303. Price not mentioned

NOWADAYS the concept of education of the handicapped within the regular classroom environment is commonly recognized. During the past, educating the handicapped in special classes were overpowered and misused. In some instances students earlier labelled as 'educable mentally retarded' had been found, later, to have potentially greater ability. This brought about the revolutionary step and the term 'mainstreaming' was introduced which according to the authors of this book is 'maximum integration in the regular class, combined with concrete assistance for the classroom teacher'. The role of a special educator may be that of a helping or assisting teacher. The goal of education of the handicapped in the least restrictive environment is an important one, and when the least restrictive environment is the regular class, all the better.

The special education has sometimes been used as a place for any student who does not 'fit' in existing programmes or who cannot adjust to a particular teacher, regardless of whether the available special education programme is appropriate for the student's special needs. It was also recognized that many handicapped students could be successfully educated in regular classroom.

The book is divided into ten chapters which include strategies and alternatives for

educating the visually impaired, hearing-impaired, and health impairments, viz allergies, asthma, arthritis, amputation, diabetes, epilepsy, cerebral palsy, spina bifida, muscular dystrophy, speech problems, mentally retarded, and learning disabilities which is relatively a new vintage.

Apart from nature, types, and identification (which include behaviour indications also) of different types of impairments, the role of a class teacher and the specialists in assisting the teacher and making suggestions, are specifics of the book.

Chapter nine deals with strategies for working with the troubled students. One should entertain doubt as to consider it as handicapping condition, instead, more appropriate would be to label 'problematic situation' or 'deviant behaviour' The book suggests the use of *glad notes* and *glad phone calls* with positive comments to encourage and compliment the troubled students when they work some extra hard. Other described approaches in working with troubled students are psychoanalytic, humanistic, behaviour modification and more important is 'responsibility-oriented' classrooms Last chapter 'The importance of good personal interaction' may move the readers. Vignetts and anecdotes by students depict how the actions of teachers have devastating effects on students.

He always wanted to explain things
but no one cared
so he drew.

The poem, which starts with the above lines was handed over to a teacher the day before the writer committed suicide. Students' handicap in itself may be a limitation but the primary nature of their problem lies on student environment interaction, student-material interaction and, above all, and of profound influence, is the teacher-student interaction.

The book provides assistance to regular educators to educate the mildly handicapped students, and cuts through most of the professional gobbledegook which access its comprehension for class teachers, educators, psychologists, and even parents if they attempt to go through it.

VIPIN CHILANA□

Indian Educational Review

invites papers on

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from philosophers, educationists, psychologists, sociologists and others.

Contributors are free to send their papers in any of the areas, snch as cognitive learning, development, classroom communications, non-formal system of communications, mass media, etc. which concern knowledge directly or indirectly.

Papers should be brief and pointed. For further enquires :

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices/ policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Alternative Approach to Universalizing Education

THE FACT that India has not so far achieved the ideal of universalizing education, a constitutional obligation, is well known. To the extent an illiterate person remains incomplete is generally appreciated. But that he gets dehumanized as a consequence is not so clearly felt or realized. There are several dimensions to this problem of how to universalize elementary education One solution as pointed out by P N. Haksar is to have a separate five-year plan for education The other solution as adopted by socialist countries is to politicize education As a result of politicization of education the workers and others learn about their duties and rights which in any case would enable them to become literate, if not more. Yet another manner of spreading literacy is to adopt organized religious prayers which of course is thoroughly unsuited to a country like ours. These then were some of the alternatives being practised or suggested. What is important is not the method but the end result We must have cent per cent literacy in this country irrespective of the method that we adopt or adapt. Therefore some serious thought needs to be given to the most efficient method that we may select. A national debate is necessary on this point

There is one more point that needs to be considered here. The total number of the scheduled tribe and the scheduled caste persons is more than the total number of those who are not so classified And yet the majority is more illiterate than the minority It is a peculiar state of affairs and demands an immediate attention Perhaps a national study on this problem be undertaken to throw light on the reasons which besides poverty prevent them from being equally literate. The studies conducted thus far have only a limited relevance For instance, the tribes in Bihar may have reasons for being illiterate but how does one explain the Mizoram's stature in the world of literacy A simplistic answer like the presence or absence of Christianity is not enough We want a more solid reason than this.

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If we consider education for example, we can see how disintegrative forces get the upper hand, because these forces are linked with power and wealth. Take the case of admission of children to schools. There are in every state only a few schools which are good and enjoy a reputation due to which most parents would like to send their children to these schools In most cases, they are private schools, some of which are run by religious missions. It is difficult to get admission into such schools even in the nursery classes, because the demand far outpaces the number of available seats. Such schools adopt either the criterion of power and wealth, or that of religion in order to eliminate the large number of applicants. Even if they admit only on merit, the meritorious children come from only some communities or classes and, therefore, the perception that the school runs on the lines of class, caste or community gets strengthened In some states, there are schools run by caste groups or religious groups, and preference is given in admission to caste or religion for admission. There are hostels based on castes and private mess run by castes For admission to medical and engineering colleges in a state, a student has to belong to that state. But there are so many who belong to the state, that there is a difference between those who belong and those who belong a little more. Even that is not enough, finally, it is money power which enters into the picture, either directly, or indirectly, through politicians and we know that in every state the net beneficiaries of development in agriculture, commerce, business and industry are generally confined to groups identified in terms of caste, language and religions. Any political party which wishes realistically to win an election battle, has to accept these groups and woo them for support. The picture is not uniform throughout India, it varies from state to state; but within every state one knows that even education is linked to the caste, linguistic and communal forces. The emergence of class where these subgroupings are submerged is yet to take place on a visible scale.

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The Use of Computers in Education

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Computers have not only accelerated scientific and technological progress but have also made tremendous contribution to improvement of managerial decision-making and solution of complex problems faced in various fields such as industry, commerce, defence and transport. In education, the computers have been used rather sporadically and for limited purposes, particularly in India. Actually computers are found useful where either a large mass of data has to be processed or where a complex analysis has to be completed in a very short time. In education, the need for computers has been felt more for handling large mass of data rather than providing quick analysis of data for operational purposes Nevertheless computers have been used for a variety of purposes in the field of education, with notable applications in educational planning, educational research, curriculum development, instruction of pupils, documentation, guidance and counselling, test construction, scoring and processing of examination results, etc. Many of these applications were made during the sixties, when computers started proliferating, a fact which has been discussed at length by Srivastava (1970). Most of the work in this area has been done in the USA and other developed countries. In India, only in recent years, computers have started being used for such purposes as processing of examination results and statistical analysis of research and survey data.

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Use of Computers in Educational Research and Surveys

In India the earliest and most significant use of computers in the field of education has been in processing of research data. In most of the researches in education, a large number of variables are involved, which are

either school variables, teacher variables or student variables like student's aptitude, interest, achievement, intelligence, home background, etc. A meaningful analysis of data calls for application of multivariate statistical methods, particularly the methods of factor analysis, regression analysis, discriminant functions, multivariate analysis of variance and canonical correlations. During the sixties, when computer facilities became available to increasing number of researchers in India, more frequent use of computers began to be made for applying multivariate statistical procedures to research data, particularly when the number of variables became too large to be handled in any other way. The advent of computers not only enable the educational research workers to undertake studies involving a large number of variables, but helped them in getting new insights into the relationships among the variables, which could not be obtained by processing the data manually using univariate methods. It was during the sixties, when the NCERT took up a few major research projects such as survey of mathematics achievement, study of need-achievement in students, project telent and an educational achievement survey as a part of an international (IEA) project For all these and many other projects taken up by individuals or teams of research workers, many new computer programmes for statistical analysis of data were either developed in the NCERT or were adapted from the available programmes. At that time, the most frequent use was made of the IBM-1620 computer for processing of data though in the USA it was gradually being replaced by better models and computers of the third generation.

While the NCERT has continued to develop its expertise in processing of educational data, and has been providing data processing service to various users within the NCERT as well as outside it, other research organizations and universities have also started providing facilities for the analysis of educational research data to researchers in recent years.

For the processing of survey data, the first major use of computer was made in 1974-75 when it was decided to process the data of the third all India educational survey using the computer facilities of the Registrar General's office. It was a huge survey in which information was collected on a number of variables from nearly 6 lakh schools and 28 lakh teachers working in these schools. About 70 lakh cards were punched before transferring the data on to magnetic tapes. A large number of tables relating to enrolment, school characteristics and teachers were generated on the computer using numerous edit-checks for consistency. While computerization helped immensely in producing the required tables for this gigantic survey, it also revealed how frustrating the problem of data preparation can become for such a large-scale survey.

Another major project which started in 1978 and is still in progress involves computerization of attendance data for monitoring the trend in school attendance at the elementary level, that is, for Classes I to VIII. From every block, quarterly statements are sent on attendance in different classes for the schools of the block which are processed centrally at the National Informatics Centre in Delhi. This quarterly monitoring of attendance is expected to provide valuable information on the drop-out rate and average attendance in schools in relation to the initial enrolment at the block, district, state and all India levels

Processing of Examination Results

In large public examinations the sheer necessity of completing the tabulation of results within a limited time has led many Boards of Secondary Education, universities

and other bodies conducting large-scale examinations to resort to the computer for processing the examination data In most cases, the computers are used for preparing individual result cards and merit lists and doing other analysis of the marks awarded to examinees But now with increasing use of multiple-choice items in large-scale examinations, computers are being used for scoring the answer-scripts as well, thus eliminating the subjectivity and time-consuming process of manual scoring by examiners. In NCERT, computers have been used for scoring the tests in achievement surveys and also answer-scripts of National Talent Search (NTS) examinations for the last several years The computer is used for scoring the objective-type tests, preparing the merit list for the award of scholarships and doing item analysis and other follow-up studies on the awardees of NTS scholarships. This was another major application of computers in education in NCERT, apart from processing of research and survey data In the several research and survey projects of NCERT where objective-type tests had to be developed and administered to large groups of subjects, computers have been effectively used for scoring, item-analysis and standardization of these tests In the absence of scoring machines, that is, the use of optical scanning device, computers have been used for scoring tests and preparing examination results quite successfully for the last 15 years or so in NCERT.

Other Applications in School Management and Teaching

Apart from the above two applications, computers have been used for other purposes also in education, but in India such uses are few and far between There have been some attempts to use computer for teaching mathematics at the Indian Institute of Technology, Kanpur (Kapur 1970). The computer-assisted instruction (CAI) has the advantage of making instruction highly individualized, enabling the child to learn according to his ability, speed and even his style of learning. Not only the CAI helps the child, the data is generated on the progress and performance of students in the course of instruction, can be used for revising and improving the curriculum. The learning can become very interesting when CAI is used, particularly for small children, but the main difficulty lies in providing computer terminal facilities to sizable groups of students for learning through CAI

So far, much use has not been made of computers in planning and administration of educational services The compilation of educational statistics in the country where more than 6 lakh schools are involved, is still done manually Efforts are being made to use computers for educational statistics by providing computer terminal facilities to the Ministry of Education.

In administration, computers can be used effectively for such tasks as posting and transfer of teachers, maintaining accounts and making projections of enrolment, teacher requirements, etc. for future Recently a model was developed for administering the transfer of teachers in Udaipur district of Rajasthan (Rama Rao, *et al* 1978). The model took into consideration the disired/ stipulated teaching standard, transfer policy of the government, transfer requests from teachers, and some other relevant data pertaining to the schools and teachers.

In other advanced countries, particularly the USA, several other interesting applications of the computer have been reported in the field of education. In some of these, an attempt has been made to simulate educational systems and sub-systems in order to evolve better systems. To consider a few illustrations, Johnson (1966) designed a computer programme to simulate student

learning in a hypothetical fourth grade class. The input data consisted of certain teacher and class characteristics, and the output data included scores on tests, changes in scores and various means and standard deviations. Cogswell (1965) simulated a whole school organization on the basis of data from about 200 schools in order to evolve best instructional plans using the different media such as TV, language laboratories, etc. The simulation was done in terms of such school characteristics as resources, procedures, organizational set-up, etc. and student characteristics that effect the school instructional plan.

Kipfer (1973) developed an administrative/management system for special education (for the handicapped children) between the ages 5 to 21. The function of the system was to prepare the handicapped students to take their place in the society after Class XII or age 21 by inculcating behaviours for partial or total economic self-sufficiency through various effective educational programmes. The model is child-centred where feedback (F) paths control sub-system output and feed forward (FF) are utilized to compare criteria with outcomes to measure the system's performance. Shaw (1972) suggested to comprehensive model for management of various activities in a school, based on continuous flow of data from the different sub-systems like business office, student's personnel office, employees' administration office, etc. which were involved in the instructional programme.

In educational planning, when it comes to the application of quantitative techniques for analysing past trends and making projections for future in respect of enrolments, teachers, school buildings, equipment and expenditure, computers prove very helpful in providing the necessary analysis and projections. They can provide different projections based on different values of parameters involved in the model, and this hel in assessing the sensitivity of the projections to the variation in parameters. To give an example, Zabrowski and Zinter (1968) used such a model to estimate future enrolments in the USA with varying retention rates. There is considerable scope in India to use computers for improving the quality of educational statistics and for using them for more effective educational planning.

Computer-assisted Instruction

In ths realm of computer-assisted instructions considerable development has taken place in the USA and other countries A beginning was made in the sixties when several independent experiments were tried in imparting instruction using computers. To mention a few of these, Tondow (1966) used a computer to teach fifth graders the elements of binary system, some computer vocabulary and the know-how of computer operations. Schurdak (1966) used computer to teach a FORTRAN course and found it more effective than other conventional methods. Atkinson (1968) developed programmes for the computer-based instruction in reading using IBM-1500 instructional system in which each student terminal consists of a picture projector, a cathode ray tube (CRT), a light pen, a typewriter key-board and an audio system playing pre-recorded messages. The CAI systems vary in complexity and can be differentiated in terms of the level of student-system interaction that is achieved. At the simplest level, the material is presented in a fixed, linear sequence; it is essentially 'drill-and-practice' system which requires a simple tele-type terminal At the most complex level, the interaction is of 'dialogue' type in which real-time decisions are made to modify the flow of instructional material on the basis of the student's response history; they require highly sophisticated

programmes and elaborate terminal devices. Howe and Boulay (1979) have discussed the role and educational utility of CAI in the light of experiments conducted in the past and have concluded that independent of the teacher, its usefulness is rather limited Of course, most of the experiments in the USA (e.g Hansel *et al.* 1971, Atkinson and Fletcher 1972, Fletcher and Suppes 1972 and others referred to above) show that CAI, in general, is more effective in improving students' performance, but the major drawbacks are its prohibitive cost and the need for more and more sophisticated programmes and terminal devices for enabling CAI to make significant impact.

In India, if any progress has to be made in CAI at this stage it will have to be confined to development of the programmes requiring student-system interaction at the simplest level. In any case there is not much scope for the large-scale use of CAI in India in the near future.

Test Construction and Item Banks

In India, various commissions and committees on education in general and on examinations in particular, have recomended development of item banks and construction of tests on scientific lines in the process of reforming the examination system Some attempts have also been made to develop such question banks in different subjects at the school and college levels as well as at the level of examining bodies, though little use of computers has been made for this purpose.

The need is for harnessing computers in developing item banks and coustruction of tests/question papers to be used in large examinations. Gerald (1973), while discussing several computer-assisted test construction systems in the USA, mentioned that the larger an item collection grows the more useful the system becomes The test constructed through computers has several advantages. It frees the educators from the burdensome task of test construction The tests are more to the specification The problem of test security practically disappears. The tests can be administered frequently for diagnostic and instructional purposes. Many users can share the item bank

Among the significant developments in this area, mention may be made of the work done in the University of Wisconsin at Oshakosh, where, as reported by Ansfield (1973), a system called Automated Examination Generator (AEG) was developed in 1969 which quickly, simply and economically compiled and generated an entire examination for evaluation of scholastic achievement in higher education He has discussed the different aspects of the development of AEG system and found that the AEG proved very economical in preparation of quality examinations for fair and just evaluation of students in higher education. Baker (1973) developed an interactive computer programme for test construction and analysis (TCAP) for periodic construction of achievement examinations, which is a task most teachers perform The primary file in the TCAP system is the item file with all its identification and classificatory codes. Another file used in the system is the file with the item analysis results along with other identifications. By means of TCAP system the instructor can maintain the item pool and create texts on demand and automate the data base. Buckley-Sharp (1973) reported the development of a bank of multiple-choice questions (MCQ) by the Department of Research and Service in Education, School of Pathology, Middlesex Hospital School, London, for the students in British medical schools for their objective assessment. Most of the work in this area has been done in the USA, UK and other Western countries In India, there is a

considerable scope for using computers for developing item banks and construction of tests in order to help in the reform of the examination system.

Maintenance of Students' Record : Applications in Guidance and Counselling

In addition to the performance record of each student, records relating to his health, personality, interests, attitudes, social and family background, etc. are very much needed for solving his psychological, educational or other problems in the school or college. Individualized instruction of special attention/guidance has to be provided to some students for improving their performance, modifying their behaviour, or developing certain desirable attitudes In the USA computers have been used not only for maintaining such records and identifying the areas of weakness but also for making coordinated efforts on various fronts to solve the pupils' problems, and monitoring their performance over a period of time They can also help in making suitable carier choice for the students In India though the need is great and computers can help greatly in this area, the main problem would be of schools' accessability to computer. In the universities, where computers are available, it is really worth trying to use computers for providing this service to students.

Information System and Data Banks

The educational statistics in India suffer from numerous shortcomings—inaccuracy, considerable time lag, poor coverage of items, inadequate machinery for compilation, processing and dissemination of information and lack of coordination among the different data collecting agencies. There is need for a well-organized system for collecting, storing and disseminating educational information. Computers have to play an important role in the development of an efficient information system for education. Also since a lot of data collected by various agencies through surveys and research studies remains unutilized or inadequately utilized, there is need for building up data banks using computer facilities to ensure that the data once collected are readily available for use in future also.

In education we need data not only for policy-making and planning but for monitoring the progress achieved in reducing wastage, in approaching the goal of universal primary education, in eradicating illiteracy, in making education more job-oriented, and so on, in many other such programmes. This calls for maintenance of stock and flow statistics, study of cohorts of students over a period of several years, follow-up studies of school-leavers, assessment of skill requirements of the different areas, studies of regional disparities, and continuous collection and processing of data relating to specific educational programmes. For all this, computers have to be used effectively so that the required data are generated, stored and used properly at all levels in decision-making.

The National Informatic Centre, Department of Electronics, Government of India, New Delhi, has taken some steps in this direction by providing computer terminals to various government departments and institutions including the Ministry of Education and Social Welfare, NCERT and UGC, which are the agencies engaged in collection of data. It is expected that in due course it will help in building up an information system in education, which will prove very useful to the educational planners and administrators.

Documentation and Library Services

While talking of the information system, it is important to give due consideration to

the role of computers in documentation and improvement of library services. With rapid expansion of knowledge and increase in the volume of reference materials one has to waste a lot of time in reaching the reference materials It becomes all the more difficult for a researcher to get the abstracts of researches conducted in a particular area. Even the management of libraries with the present cataloguing system has become a difficult task. In many developed countries computers are being used for development of systems for maintaining information in such a form that any book or material can be made available to the user in minutes, if not seconds. The abstracts of researches according to specific areas can be stored on tape files with code numbers and as per the requirement of the user the computer retrieves it and presents it on the desired output media. Kemeny (1962) was given a glimpse of such a computerized library in an article 'A library for 2000 AD'. The use of computer is being increasingly made in providing documentation services in many fields, particularly in science and technology This has to be extended to other subject areas also

Conclusion

On reviewing the position of the use of computers in the different areas of education, it is clear that there is great need and considerable scope for using computers in a number of areas. Computer facilities have been increasing rapidly in the government, universities and other organizations, and these are now available to potential users in all fields. There is no more the excuse of lack of facilities. Perhaps there is need for greater awareness and a will to switch over to computerization where it is feasible and economic from the point of view of cost effectiveness. Of course in certain areas where cost may be very high and where high level of technical sophistication is required for effective use (e g in computer-assisted instruction), it would not be desirable to use computers except for limited experimental purposes.

To sum up, at the present stage, the computers should be used more and more for the following purposes in the field of education:

1. *Development of a scientific information system*. Computers should be used in compilation and processing of educational statistics, storing the information and making the same available to users They should also be used for processing the data collected in educational surveys of the fact-finding type to strengthen the data base In this connection it may be noted that computers can be effectively used for maintaining master lists of schools, teachers, etc. to be used as a frame for sample surveys as well as for other purposes Also, by giving code numbers to schools and to students, where feasible, an individualized data system can be developed for improving the educational statistics. For students this can be tried only at the university level and in professional institutions, since at school level it may not be practicable.
2. *Building up data banks*. Often large-scale surveys and research studies are conducted in India, in which the data collected can be used for different purposes in future This calls for storing data on magnetic tapes in easily retrievable form. Computers can be used for this purpose very effectively
3. *Construction of tests* Computers can be used for developing item banks and constructing tests/question papers from items stored in the

bank With so many public examinations that are conducted every year, such a system will prove a boon to examining bodies.

4 *Processing of examination results:* Computers are being used increasingly in this area. There is need for making greater use of objective type tests and introducing mechanized scoring in large examinations to make the task of conducting examinations much simpler than what it is at present

5. *Educational planning and management.* Computers have to be used for providing sophisticated analysis of data, study of trends and making projections for the future. A good data base can be immensely helpful in educational planning.

By simulation of school systems, and educational processes many problems can be studied very effectively. In education, since a very large segment of population consisting of students, teachers, educational administrators, etc is involved and a huge expenditure is incurred by the government and the people, there is need for streamlining the administration for providing efficient service to the people. The computers will definitely help in the improvement of educational services, and making more efficient use of resources if they are increasingly used for processing the data for decision-making and developing models for efficient functioning for its sub-systems and sub-sub-systems at all levels. There is considerable scope for applying techniques of operations research, PERT/CPM and other modern management methods for efficient management of the educational system and schools, and computers have to be inevitably used in applying most of these techniques

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Strengthening Guidance Services and Programmes for Career Development

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VOCATIONAL development being a continuous process, careers guidance services and programmes for facilitating this aspect of development are needed at all stages from early childhood up to post-retirement, and will have to be offered in diverse settings, both formal and non-formal. Certain measures to strengthen guidance services for career development are common to all or most stages and settings in which such services are offered. We may first consider these common elements.

Assumptions, Objectives, Approaches

As programme content, techniques, personnel competence stem from objectives, it is essential that the assumptions and objectives of guidance services for career development should be laid down in clear-cut terms and should be known to and agreed upon by all concerned. The goals of guidance are both individual and societal, but the emphasis can vary considerably. The approach can also vary considerably, from a highly prescriptive one to a highly permissive one, although they lie along a continuum Moreover, as vocational psychology has clearly shown the close relationship between vocational adjustment and general adjustment, the objectives of career guidance will have to be broad enough to include non-career aspects of individuals also However, the resources for guidance being very limited everywhere, the question arises as to what limits have to be set to the extent to which non-career aspects can be included in the objectives of career guidance in actual practice. Nonetheless, even in actual practice we must ensure that the guidance service is an integrated one, permeated by this broader philosophy and that the limited objectives, programmes and techniques flow from it

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instead of being an ad hoc conglomeration

Many other issues are involved here. Obviously the resolution of all such issues must take place within the context of the political, social and economic conditions prevailing in the particular country. But attempts at recognizing issues and resolving them need to be made. Differential perception of issues, assumptions and objectives can lead to confusion and conflict Discussion forums and orientation programmes involving the interaction of all concerned, including administrators, can go a long way towards the clarification and acceptance of the philosophy, goals, scope and approach of guidance services and programmes.

Working with Administrators

Guidance services have at times been established consequent upon a hasty and ad hoc decision on the part of some administrators, which is not adequately backed by follow-up action, including funding, on a long-term basis Quite often administrators are transferred or retired and are replaced by others who see no value in guidance services and are not prepared to support them. Guidance services set-up, because of the initial enthusiasm of their predecessors, are then closed down or drag on in an extremely weakened state. It is, therefore, important that the foresight and enthusiasm of the administrators who initiate the guidance service should be followed up by the formulation of a policy and plan for its implementation, along with the provision of adequate financial and other resources, on a long-term basis (Odgers 1962). This would ensure continuity.

Another essential element is the orientation of administrators to the need, scope and nature of guidance services for career development, and to the ways in which they can contribute to the welfare of the nation as well as the individual. This can be done through individual contacts with the seniormost administrators, not forgetting those in the ministry or department of finance, as well as through group programmes for middle level administrators such as inspectors or district education officers (see, for instance, Mehta 1978) and school principals.

The Role of Centralized Agencies, Professional Associations and International Organizations

While too much centralization in educational matters is generally considered undesirable, there are certain definite advantages in building up a strong national and state or provincial level organization for guidance services for career development. Counsellors have heavy workloads and need to devote all their time to working with clients. Besides most of them do not have the higher level professional expertise which is required for performing such functions as research, development and training. Centralized agencies are better equipped to undertake such functions as orientation of administrators, policy-making, planning and supervision of guidance services, selection and training of guidance personnel, clearing-house and coordination functions, research, development, the bringing out of publications and dissemination of educational and occupational information. These agencies must also see to it that the personnel and other resources provided for guidance services are not diverted for other types of work

Professional associations of guidance workers can also contribute to the strengthening of guidance services and the professional development of guidance personnel. They should try to obtain financial assistance from government, philanthropic foundations and international organizations in order to supplement their own financial resources which are usually very slender.

Very few international organizations show any interest in the promotion of guidance services for career development Unesco and ILO are exceptions, but even their interest and involvement is very limited. They could contribute considerably to the strengthening of guidance services for career development if they were to provide more training opportunities for guidance personnel, carry out or fund research and development projects, provide financial assistance to the developing countries for setting up or strengthening national and state or provincial level organizations for guidance, bring out suitable publications, and provide the services of consultants to those countries where adequate expertise is not available.

Professional Education of Guidance Personnel

One of the best ways of strengthening guidance services is to increase the competence of guidance personnel. This means improvement in selection and initial professional education, and provision for continuing professional development. It is still all too common to find that guidance personnel are inadequately trained or even not trained at all in guidance. While developing countries generally cannot afford to have long periods of training for guidance personnel, certain minimum professional standards should be laid down and it should be ensured that only persons who meet these minimum requirements are employed in guidance position.

While various ingredients go into the making of a good programme of counsellor education, self-understanding and understanding of the world of work are particularly important for the counsellor who is to offer guidance services and programmes for career development. It has, however, been observed that counsellors working in settings other than employment offices, business and industry, generally have very inadequate knowledge of the world of work. The professional education of such counsellors should include more exposure to various occupations through in-plant visits and shadow experiences (Kelley 1978) as well as through actual on-the-job experiences during vacations, wherever feasible. Such exposure can add a realistic dimension to career development services, particularly in school and colleges. On the other hand, counsellors working in employment offices, business and, industry, and allied settings tend to have inadequate knowledge of the nature and role of psychological factors and their assessment Their professional education should include greater emphasis on this area. Although it is recognized that counsellors can function more effectively if they acquire greater self-understanding and self-acceptance, counsellor education programmes are generally extremely weak in this area The inclusion of appropriate learning experiences of a self-exploratory nature in counsellor education programmes could lead to improvement of guidance services and programmes for career development.

Encadrement of Guidance Personnel

In some countries a major problem in rendering effective guidance services arises because the specialized nature of guidance services and the professional education required for it is not recognized, and guidance personnel form a part of the general educational or employment cadre. This means that a guidance worker is often shifted out of a guidance position because he is due for promotion and the higher positions available are all in fields other than guidance. Quite often guidance personnel are also transferred to non-guidance positions at the same level because of some rule which requires the periodic transfer of employees, or to oblige someone posted elsewhere who wants to live and work in the place where the guide posi-

tion is located This results in unqualified and inexperienced workers being posted to man guidance services and the loss of qualified and experienced workers. Of course most workers would not like to bypass an opportunity for promotion and cannot disobey an order for transfer

Probably the best way to resolve this problem is to have a separate cadre for guidance personnel, within which they can have adequate opportunity for going up the professional ladder. If, however, it is not feasible to have a separate cadre, it should at least be possible to ensure that guidance personnel are not transferred to parallel positions in non-guidance fields This will lead to increased involvement and expertise among guidance personnel, which in turn can considerably strengthen guidance services.

Use of Para-professionals, Community Resources and Mass Media

Paucity of manpower and financial resources will continue to be a feature of the guidance scene in most parts of the world One way to alleviate the problem is to confine the work of professional guidance workers to those activities which require specialized professional education, and to provide them with the help of para-professionals and clerical staff for such activities as can be handled by workers of this type. This will make it possible to render guidance services to more clients without diluting the quality of the service

In addition to the formal agencies for guidance most communities have resources which can be tapped for promoting career development Business, industry, research and development organizations, governments, defence services, hospitals, service organizations such as the Rotary Club, the Lions, and the Junior Chamber, and organizations such as the YMCA, the YWCA and others working for the development and welfare of young persons as well as adults, are in a position to contribute to career development programmes Counsellors working in educational institutions can also call upon parents and alumni for help. All such groups are usually very willing to help, but it is observed that in actual practice their involvement is sometimes very limited This is because counsellors do not approach them A systematic but imaginative attempt to identify and utilize community resources to promote career development can go a long way in strengthening career development programmes

In developing countries, at least, mass media have generally not been adequately exploited for guidance purposes Guidance programmes put across through mass media, as well as programmes for parents and the general public to orientate them regarding guidance services and to give them information which they can use for self-guidance or for helping their children, can go a long way in supplementing the more conventional guidance services rendered to individuals and groups through face-to-face contacts

Strengthening through Research and Development

Research and development activities can help to lay a firm foundation for the strengthening of guidance services for career development. Unfortunately their importance is not always recognized, and funding for this purpose is never adequate, particularly in developing countries which are beset by economic difficulties However, ploughing of more money into research and development will not in itself suffice.

Significant areas of work need to be identified and research and development efforts need to be concentrated in these areas rather than frittered away on disparate and

insignificant topics. Vocational development, vocational motivation, satisfaction style, and dynamics of effective counselling are among the most significant areas in which there is still a great need for research, although a considerable amount of research and of theory building based on it has been going on. What is needed now are theories that take into account the wide variations in cultural, social, economic and political conditions, for it is within the matrix of such factors that development and change take place.

The potential uses of the products of the research and development projects, and the manner in which the users will be reached should be spelt out in advance. Technical reports should be supplemented by reports for popular consumption. Also, many guidance workers need additional grounding in research methods to supplement their professional education in guidance and counselling.

The planning of programmes for career development should be closely linked with clients' needs, hence periodic assessment of needs in the context of changing conditions is required. Evaluation of the effectiveness of the career guidance service as a whole, as also that of specific programmes, techniques and tools has also to be undertaken.

In developing countries there is still much scope for improving the quality of guidance tools and making them more accessible to the programme operatives. All too often one finds informational materials which are poorly designed and printed, and unsuitable to the level of reading ability of the client group for whom they are meant. Occupations are described only in terms of work to be performed and the training required for it, without inclusion of any material of psychological or sociological interest, the kind of life the workers in the particular occupation live, and the satisfactions they enjoy or the hardships they suffer. A variety of attractive literature, films, tapes and other aids for acquainting people with the world of work, giving accurate and relevant information regarding various aspects of the occupation, needs to be brought out. There are also several problems in making these materials available to guidance workers and their clients, to which I have referred in a paper I presented at the IXth World Congress last year (Mehta 1930), which need to be tackled.

As regards psychological tests, there has been a trend in at least some of the developing countries to use foreign tests with little or no adaptation, merely developing norms for their own country but without ascertaining the suitability of the context and the validity of the tests in their own settings Obviously more development effort in this area is indicated However, owing to differences in urban-rural setting, language and culture which characterize many of these countries, it may be many years before an adequate number of tests suitable for the various types of population are developed. Meanwhile it may be advisable to develop non-psychometric self-assessment devices which can help clients to increase their self-understanding and to relate it to their educational and career planning,

Special Programmes for the Disadvantaged Groups

Every society has its disadvantaged groups which are not able to have access to, or derive much benefit from, the normal educational and welfare services. Such groups include the economically deprived, the socially disadvantaged such as persons belonging to certain castes, the tribal folk living in remote and extremely under developed areas, the first generation learners, migrant workers and their families, certain ethnic minorities, the physically handi-

capped, and the mentally retarded. It is now generally accepted that even girls and women belong to the disadvantaged category.

It is recognized that persons belonging to such disadvantaged groups often have special problems and needs and require special assistance in some or all aspects of their development While some facilities to promote their career development do exist, in the developing countries they are extremely limited and tend to be confined to the physically handicapped Much more provision needs to be made for guidance services and programmes for facilitating the career development of these disadvantaged groups. The characteristics, problems and needs of each such group should be carefully studied before evolving special career development programmes for it, and the programmes should be integrated with other educational and welfare programmes so that the individual as a whole can be helped in all aspects of his development

Guidance for Self-employment

Guidance programmes for career development typically have employment opportunities as one of their main foci This tends to make clients, particularly students, believe that they must look for job openings, and tends to foster dependence rather than initiative and self-reliance When job openings become scarce, they feel deprived and helpless, or sometimes rebellious, expecting that the State must provide them with employment or with unemployment benefits In these days when employment is rampant, guidance programmes should disseminate information regarding prevailing unemployment and that which is foreseen in the next few years, and draw attention to opportunities for self-employment The programmes should include information regarding facilities for training or re-training, consultative services, financial aid such as loans and tax concessions, labour laws, etc. as well as a component designed to facilitate attitudinal change

We may now turn our attention to guidance services and programmes for career development in certain broad settings, reviewing their problems and shortcomings and suggesting ways of strengthening the services These suggestions supplement those already made which cut across settings

In Schools

The School's Responsibility for Career Development

The school's responsibility for career development appears to be fairly accepted in some parts of the world, but in other parts of the world there is very limited acceptance, and in still others the schools do not appear to be at all aware of this responsibility, or even reject it outright as being beyond their scope and their resources In school systems which have a limited understanding and acceptance of responsibility for career development, the objectives of the programmes are limited to helping the students to take a decision at certain critical points, viz. when they are required to choose an educational stream or courses, and when they are required to decide what they are going to do after completing their schooling. Worse: in many educational systems she school does not even recognize the importance of help ng the students to make their own decisions in these matters, but takes upon itself the responsibility for decision-making by allocating students to various courses, and advising or even exhorting students as to what they should or

should not do Obviously the assumptions and principles of guidance and counselling need to be much better understood.

Where, however, the school system accepts responsibility for career development it tries to integrate guidance and counselling at choice points with what has come to be known as careers education or career education. Watts and Herr (1978) have commented upon the differential use of these terms and the meaning attached to them in Britain and the USA, and have shown how the assumptions and objectives also differ

Programme Content

Guidance programmes for career development in developing countries are often conceived in terms of dissemination of occupational information which too is regarded as an extra-curricular activity. This activity is not even given the same status as sports and games are given for physical development, and regular time is not allotted for it. Moreover, the method of imparting the information is haphazard and consists almost exclusively of talks, which the students find boring.

All this ought to be changed. Occupational information—a better term would be 'career work' or 'career education'—should be considered a regular curricular activity, properly planned in a graded sequence with textbooks and work-books It should also be included in the curriculum of other subjects in a planned manner.

Career development includes not only development of concepts regarding work and knowledge about occupations but also the development of the self-concept in relation to the world of work. The development of the self-concept is a process which involves differentiating the self from others, and understanding and accepting the self, including one's abilities, interests, values, the meaning and importance of work in one's own life, the preferred life style, etc. It is a process of finding one's vocational identity, of implementing one's self-concept in vocational terms (Super 1956)

Exploratory experiences involving exposure to activities and their settings in the world of work facilitate this process Such learning experiences must be provided by the school through a variety of career projects supported by audio-visual aids, observation of and interaction with different types of workers, and the try-out of various work activities wherever feasible. There is also good scope for integrating career development programmes with the programmes of work-experience which many schools are now offering

Self-exploration in terms of one's psychological abilities, interests, values, etc. is also needed during the adolescent years. The school guidance service must provide opportunities for this through various means such as the use of psychological tests and non-testing techniques, a joint review of the student's development as recorded in the cumulative record card or folder, participation in co-curricular activities, hobbies, part-time or vacation work-experience, and voluntary community service

The school should also provide adequate opportunities for counselling in order to help the student to evaluate all these experiences, to integrate them to a vocational self-concept, and to make educational decisions and plans in consonance with his self-concept and the realities of the world of work. In the process the student should be helped to learn decision-making skills which will be useful to him all through his life. In cultures where parents play a predominant role in career decision-making, the counsellor will have to involve the parents too in some phases of the counselling

Staffing

Guidance for career development is a team function involving the school principal, all the teachers and even the staff although the counsellor or the career teacher plays the central and coordinating role This is, however, not always recognized and the counsellor or career teacher is left to go it alone. The model of the Career Activities Team described by Mannebach and Stilwell (1978) is a flexible one which can well be adapted. Teacher education programmes should require at least an introductory course on guidance, so that all teachers understand their responsibility for contributing to the career development of their students and the ways and means of doing so.

The contribution of subject teachers to career education has been very well brought out by Hayes and Hopson (1971, pp. 118-119) who stated .

> The authors have met English teachers who have built into their own courses industrial role-playing, preparation for job interviews, writing applications for jobs and courses, socio-drama to explore problems faced by young people, writing imaginary biography of members of particular occupations, writing their own autobiography as imagined when they are 65 + (to help in the process of self-assessment), etc. Mathematics teachers have played into their curriculum calculations (which, of course, involve explanations) of national insurance benefits, unemployment rates, income-tax, insurance schemes, hire purchase, house buying, and so on. Social studies and geography teachers have discussed the structure of local industries and commercial activities, jobs entered by young school-leavers locally and nationally, income rates from different jobs and education levels, trade union activities, local authorities for youth, the impact of commercial advertising, personal grooming and home economics. All subject teachers point out the job opportunities for someone who specializes in French, history, mathematics, music, etc

Apart from strengthening the career development programmes, the involvement of subject teachers can go a long way in building up a relationship between the career teacher or the counsellor and the school faculty, enabling the former to be considered a regular member of the faculty and career education an integral part of school education. Further, if the career teacher or the counsellor is in a position to coordinate the contributions from subject teachers and arrange them in a graded sequence, his status vis-a-vis other members of the teaching faculty may be upgraded.

The community parents, alumni, and even peer groups such as the scouts and guides and the societies and clubs for various activities which are to be found in schools, can also be encouraged to participate in career projects A project involving parent participation has been described by Bank (1969), an elementary school counsellor In a project called 'careerland programme' she encouraged some parents to play vocational role models. To describe selected occupations and to recreate actual conditions in their working environments, she requested the parents to come to her school dressed in 'on-the-job' working clothes and to bring with them vocational symbols of their jobs. They were also interviewed by the pupils and the discussions were recorded. Such programmes being inexpensive and involving community participation are suitable for adaptation in schools, particularly when funds are scarce.

The school guidance service should also draw heavily upon the resources of the employment service for obtaining up-to-date occupational and employment market information, for career development materials, and for implementing career development programmes. It should also provide relevant information about the student to the employment office when the student seeks its services for obtaining employment, subject, of course, to the student's consent. While such collaboration is accepted everywhere in principle, in practice there is often very little collaboration. A closer liaison can contribute considerably to strengthening career guidance

In Colleges and Universities

Counselling services have been instituted in many colleges and universities in the developed countries, but they are concerned mainly with the personal-social development and adjustment of the students. Counselling and remedial education are also available for students who are having difficulties with their academic work. But guidance and counselling for vocational development have not been given due importance.

Faculty members as well as the office of the dean of students provide advising to help the student decide upon courses of study, but there is little or no attempt to relate these to the students' career planning. The persons doing the advising are specialists in their own subjects and not professional counsellors Moreover, they are short of time Hence they are generally of little help to students in their career development. Students are aware of this and generally do not discuss with them their career plans. Even when the student approaches them with a vocational problem, they either give inexpert advice or refer the student to the counselling centre But it is not unusual to find that the counselling centre does not have any staff member who has specialized in vocational counselling, and so the student does not get adequate help even in the counselling centre

This situation arises partly from the tradition of student personnel work, which had its beginnings in administrative contacts with students and later moved into counselling contacts also Residence halls staff also developed interest in counselling as they saw its potential for facilitating the personal-social development of the students Neither of these groups of workers, however, have had professional education in vocational counselling which they did not consider to be their responsibility.

There are other aspects of the ethos too which are unfavourable to the development of career guidance services in colleges and universities These institutions have a liberal arts tradition which has been concerned with the imparting of knowledge, the broadening of outlook and, in general, the cognitive development of the student. In the better of these institutions the concern has extended to personal-social development. But they have not perceived it their function to prepare the student for the world of work—indeed this has been considered infra dig ! Unfortunately these ethos often extends even to the university counselling centre : vocational counselling tends to be considered these least prestigious of the counselling specialities. In the professional and vocational colleges, on the other hand, it has been assumed that the student has already made a vocational choice when he chose to enter the institution, and hence career guidance has been considered redundant

In the developing countries the colleges and universities often do not have counselling services. There is lack of awareness of

students' problems and needs and the educational institution's responsibility for guiding and facilitating all aspects of the student's development Educators from developed countries have oriented some of their counterparts in the developing countries to the need and importance of student personnel services in colleges and universities. Many surveys have been conducted of the problems and needs of college students, which have highlighted the need for guidance and counselling Despite this growing awareness, however, the services are inadequate in most places and non-existent in others Even where they exist, they are often manned by persons who have not had professional education in counselling, and the scope and quality of the services rendered is quite inadequate

In order to strengthen guidance services for career development in institutions of higher learning, the administrators and faculty must be helped to see that career development is a continuous process which extends through the college years; that many young people have not made a choice, or made only a very tentative choice when they enter a college, and quite often these choices are not very realistic; that choice of courses of study has to be related to career planning, and that the college or university has responsibility for the vocational development of its students Also that their own efforts need to be supplemented by the services of professional workers specially trained in careers guidance work The college or university counselling centre must have on its staff counsellors specializing in career counselling, as well as other resources such as a library of careers literature, tapes, films, and computerized information system

During the college years young persons are often still seeking a vocational identity and are confused about their values Counselling and other programmes for values clarification are, therefore, important for career development during this stage. Career development can also be facilitated if the college or university establishes closer links with business and industry and with the employment service. Career consultation programmes, shadow experiences, part-time or vacation jobs, and community or national service can be organized with their help, and such experiences can be quite valuable for career development.

In Employment Offices

Guidance services in employment offices are beset by special problems. In the first place is the problem of lack of motivation on the part of the clients to seek vocational counselling They are only interested in getting a job, particularly in countries where there is a great deal of unemployment. In some countries, for instance India, the caste factor comes into play and the client refuses to consider jobs in lower level occupations involving manual work even though these may be the occupations in which employment opportunities exist to any significant extent Thus the need for guidance services is very great but the need is not always perceived by the clients Another source of difficulty is that employment counsellors, by and large, are not in a position to study and influence individual clients in the manner that school and college counsellors are able to do, partly because they do not have the time, partly because their training in psychological assessment is very limited, and partly because their client group changes from day to day

One way of dealing with these difficulties is to give orientation talks to groups of clients at the time they register for place-

ment in the employment office, the purpose of which would be to inform the clients about the availability of the guidance service and its nature, motivate them to avail themselves of the guidance service, and also to present a realistic picture about surpluses and shortages of openings in various occupations. Thereafter the clients who opt for vocational counselling may be grouped according to their needs and interests, and group counselling provided to them. Group counselling would also result in mutual sharing of experiences and trading of useful information obtained by members of the group in the process of job-hunting—information which may not be available even to employment service personnel Group counselling may also increase motivation to make further use of the guidance service, including requests for individual testing and counselling

The strength of guidance services in employment offices has always been and will continue to be in the area of occupational information and employment market information. Sometimes, however, the informational material is of a poor quality, unattractive, and laid out in such a manner that it is not easily accessible to the clients. There is much scope for improvement in this respect. Every employment office should have a careers library. The holdings of the library should not be confined to printed literature, but should include various types of attractive audio-visual aids such as tapes, slides, film-strips, and films. A centralized computer-based information system could also be very useful in countries where the general public has acquired some familiarity with computers Obviously it is important to keep the information up-to-date as information of this type tends to get out of date quickly

In addition to the guidance service which he renders to clients coming to the employment office, the employment service counsellor also has responsibility for contributing to the guidance service in schools and colleges He can do this indirectly by providing the latest information and appropriate informational material to the counsellor in the educational institution. He can help in organizing in-plant visits, career conferences and displays, etc for the students. He can also work directly with the students, providing information through group programmes as well as individual counselling He can provide orientation to the students regarding the guidance service in the employment offices, thus forging a link between the school and the employment office and motivating the students to come to the employment office not only for placement but also for guidance The employment service counsellor can contribute to the improvement of not only career development programmes in educational institutions but also of the content of education itself by effecting liaison between educational institutions and business and industry. He can communicate to the educational authorities the employers' expectations and needs, and to the employers the ways in which they can contribute to the career development of students.

The employment service counsellor should also provide occupational and employment market information to the general public and bring about attitudinal changes whenever they seem to be required. He can do this through the use of mass media and also by organizing group guidance programmes for the general public

Persons who are compelled by technological change or other factors to change their occupation radically, women desiring to enter or re-enter the employment market during their middle years, retired persons seeking re-employment, are some of the special groups to whom the employment service counsellor has to offer career guidance.

Guidance services in employment offices thus have an important contribution to make to the career development of the young and the old, within the formal setting of institutions and in non-formal settings. However, in order to enable the employment service counsellor to function adequately, a strong centralized support system is required at the national or state level in the ministry or department of labour and employment While such set-ups generally exist they are at times very weak and require considerable strengthening in terms of manpower as well as funding.

In Business, Industry and Government

There is a growing understanding of the importance of job satisfaction among employees on the part of the persons at the helm of affairs in business, industry, government departments and other organizations, and many of them have set up personnel departments in their organizations which are staffed by specialists in personnel management. The personnel departments have, however, focused on selection, allocation to specific jobs, induction and training, maintenance of personnel records, etc. and vocational counselling is still generally not a part of their activities.

In-plant counselling services can be most helpful for the career development of the employees. Many young persons after leaving the educational institution go through a period of floundering or 'unstable work period', and tend to take up any kind of employment in any organization where they can find it. It should be the concern of the personnel departments to evaluate the work capacities and potentialities of inexperienced workers and place them in positions where they can work successfully and with satisfaction Counselling and other personnel programmes can also help them to acquire additional skills through appropriate training Mid-career re-evaluation through counselling can help employees to make such adjustments in their vocational, personal and social life as would help them to maintain their career status and efficiency or to change their career Recognition of the importance of the quality of the work life, and of career as being a flexible and changing entity instead of the static entity which it was hitherto considered to be, as well as problems generated by the rapid obsolescence of information and skills, have increased the need for counselling at this stage of the career. Pre-retirement counselling is also needed for employees. It should orientate them to the changes involved when they retire, acquaint them with possibilities for remunerative work and voluntary community service, and community resources which can help them as regards their health needs, social adjustment, etc as well as training programmes for hobbies and vocations suitable for older persons Pre-retirement counselling as well as post-retirement counselling can be of great help to the older worker in making a smooth transition from the role of a full-time bread-winner to that of a retired senior citizen

Problems which are frequently encountered in work situations, such as late coming, absenteeism, negative attitudes towards authority, infringement of rules, work inhibitions, lack of confidence or over-confidence, conflict with superiors, colleagues, subordinates, dissatisfaction with the rewards or conditions of work, etc are also best tackled through counselling within the work organization. Performance appraisal is another function to which counselling can make a contribution. In-plant counselling can help the employee clarify his conception about his work role, understand his own goals and those of the organization and resolve conflicts between them, and increase identifica-

tion with the organization. Counselling can also help the employee to resolve interpersonal conflicts and other problems which may be bothering him in his family life. Such constructive action can help the employee in his career development and total adjustment and also increase efficiency and productivity in the organization and reduce labour turnover

Specialists in vocational counselling are certainly needed in work organizations However, since much of the worker's interaction is with his immediate superior, it is inevitable that anyone who supervises the work of another at any level will be involved in directing or advising or counselling that individual At present these interactions are of the nature of directing or advising, and counselling concepts and approaches are not a part of the supervisor's repertoire in most work organizations. Hence counselling philosophy, concepts and techniques should be imparted to all supervisors through inservice training, and to those in the managerial cadre even in the course of their professional training. In fact counselling philosophy should be reflected in the climate of the work organization.

In Hospitals and Rehabilitation Centres

All hospitals have patients who are worried about their capacity to work, or are actually incapacitated due to long hospitalization or surgical intervention following injury or disease or chronic illness. Then there are patients whose vocational maladjustment is a major contributory factor in their psychogenic or psychosomatic illness. Mental patients not only need occupational therapy but vocational rehabilitation before their return to the community and also after So do the mentally retarded. The need for vocational counselling for such client groups should be recognized and met in the hospital itself.

At present there is insufficient understanding even among medical personnel about the role of emotional factors, including vocational maladjustment, in illness. Their professional education needs to be considerably improved in this respect. More understanding among the general public can be inculcated through inclusion of appropriate topics in the school curriculum as well as through the use of mass media When such awareness develops, the need for vocational counselling in this context will hopefully be realized.

There is better recognition of the need for career counselling of the physically handicapped and some provision for it has been made in vocational rehabilitation centres. However, in the developing countries misconceptions, strong attitudes and apathy on the part of the public, the government, and also the medical profession have greatly hampered the provision of career counselling services. One runs into the argument that if the country cannot provide guidance and employment to all its able-bodied and normal citizens, how can it afford to provide it to the sick and the handicapped ? The public as well as professional workers in hospitals and rehabilitation centres have yet to accept the principle that the sick and the handicapped do not differ from normal persons except in respect of the part of the body or the behavioural capacity affected Another example of a wrong approach is the use of lists of occupations, each list prescribing occupations which are supposed to be suitable for one particular category of the handicapped—one list for the mentally retarded, another for the blind, and so on. Public education is needed to change this and other incorrect attitudes, and to establish the right of the sick and the handicapped to employment, and to career guidance on par

with other citizens

Proper assessment of the nature and extent of the handicap as well as of the residual capacities and functions is important. Assessment tools developed for use with normal persons may not be suitable for use with the handicapped. Hence special assessment tools may have to be devised. The assessment will have to cover not only cognitive abilities, psychomotor skills, and vocational knowledge and skills, but also knowledge and skills important for living in the community, such as those involved in self-care, in commuting from residence to place of work, in communicating and in interpersonal relationships.

If the handicapped are to be happy and career effective their adjustment in non-career areas such as emotional and personal-social will have to be considered too. Counselling for adjustment in all these areas should form a part of the total rehabilitation service Also the rehabilitation process must start as early as possible, while the patient is still hospitalized

In Various Other Settings

Non-formal education centres, adult education centres, rural development and agricultural extension centres, and agencies for the welfare of the disadvantaged sections of society are examples of other institutional settings in which the clientele could well derive benefit from guidance services and programmes for career development It is unusual to find guidance services in such settings, but it is time to realize the need and to provide them

Non-government agencies (private agencies) such as those run by the community or by philanthropic trusts or religious organizations have always been in the forefront of the vocational guidance movement and have a record of excellent service. They are, however, usually handicapped by shortage of funds If the government or the community could make available more funds to them, they would be in a position to make a greater contribution to career development.

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Education as a Concurrent Subject

A New Tool for Educational Reform

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This article analyses various issues relating to the provisions on education in the Constitution specially with regard to the universalization of the elementary education. Some statistics on non-enrolled children in the age-group 6 to 14 as worked out on the basis of all India educational surveys have also been presented to give an idea of the magnitude of task before us.

THERE are three guiding provisions contained in the Part IV—Directive Principles of the State Policy of the Constitution of India which provide in unambiguous terms, the basic framework for policies and priorities in education. These are :

1. *Article 41* provides . "The State shall within the limits of its economic capacity and development make effective provision for securing the right to work, *right to education*. ."
2. *Article 45* enjoins "The State shall *endeavour to provide, within a period of ten years of the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.*" This is the only Article in the Constitution which indicates time-bound programme for the much cherished social goal
3. *Article 46* states "*The State shall promote with special care the educational and economic interests of the weaker sections of the people and in particular, of the Scheduled Castes and the Scheduled Tribes and shall protect them from social injustice and all forms of exploitation.*"[1]

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[1] GOI. *The Constitution of India* (as modified up to Jan. 1977), Ministry of Law, Justice and Company Affairs, New Delhi, 25-26, 1977

The scope and limitation of the Directive Principles of the State Policy have been set out in Article 37 which states that "The provisions contained in this part shall not be enforceable by any court, but the principles therein laid down are nevertheless fundamental in the governance of the country and it shall be the duty of the State to apply these Principles in making laws".

The Directive Principles are applicable to both the State and the Union Governments They have a strong binding force and provide guidelines to the government in the matter of administration, formulation of policies and laws "They embody the aims and objects of the State", and therefore, are crucial for the implementation of socio-economic programme in our welfare State.[2] Since the Directives are not enforceable in courts and they require to be implemented by legislation, the provisions therein are not thus judicial or judiciable *per se*. Yet, no welfare State can afford to ignore them and delay the implementation of programes and policies visualized in the Directives. In this context the broad propositions formulated by the full bench of the Supreme Court deliberating on Keshavananda *vs.* State of Kerala (1973) case are relevant to note. These are :

1. There is no disharmony between Directives and Fundamental Rights because they supplement each other in aiming at the same goal of bringing about social revolution and the establishment of a welfare State which is envisaged in the Preamble.
2. Even the condition for the exercise by each individual of the Fundamental Rights cannot be ensured, unless the Directives are implemented.
3. Parliament is competent to amend the constitution to override or abrogate the Fundamental Rights in order to enable the State to implement the Directives.
4. The courts have a responsibility in so interpreting the Directives with the individual right

It would be thus seen that the Directive Principles are fundamental and they are more than mere guidance for the government for ormulating socio-economic policies and no government can afford to ignore them

Our Performance

Our performance in implementing fully Directives in the matter of education has been less than adequate Even after 30 years of the adoption of the Constitution, education up to the age of 14 is not free and compulsory in all the States and Union Territories. Out of 31 States and Union Territories *four* have yet to make primary education for the age-group 6-11 years 'free'. Fourteen States and Union Territories have, however, enacted legislation to make education compulsory for the age-group 6-11 years (not up to 14 years) and there are only two states, i e Tamil Nadu and Sikkim which have passed legislation for making education compulsory for the age-group 6-14 years and 5-13 years, respectively.[3] Education is, however, free inasmuch as no fees are charged from students in the government, local body and aided schools in Classes I-VIII in all States and Union Territories except for boys in Classes VI-VIII in Orisia and Uttar Pradesh [4]

The position in the sphere of enrolment

[2]Durga Das Basu, *Constitutional Law of India*, Prentice Hall of India, New Delhi, 1977

[3]GOI. Selected information on school education in India, 1978-79, Ministry of Education and Social Welfare, New Delhi, 6-7, 1980 (mimeo.)

[4]GOI. *Annual report 1979-80*, Ministry of Education and Social Welfare, New Delhi, 1-2, 1980

in the age-group 6-14 years as revealed by the Fourth All India Educational Survey is given in the following paragraphs

TABLE 1

AGE-SPECIFIC ENROLMENT RATIO IN 1978-79

Classes	*Age-group*	*Boys*	*Girls*	*Total*
I-V	(6-11 Years)	77	55	66
VI-VIII	(11-14 Years)	54	32	43

Source *Fourth All India Educational Survey—Some Statistics on School Education*, NCERT, New Delhi, 1980

According to the Survey the gross enrolment ratio for the elementary stage (Classes I-VIII) works out at 66 (82 for Classes I-V) in the age-group 6-11 years and 37 for Classes VI-VIII in the age-group of 11-14 years) The gross enrolment ratio represents proportion of total enrolment in specific stage irrespective of the age-group supposed to be in school in that stage The gross enrolment thus includes children of 6 years as well as those above 14 years of age. The age-specific enrolment ratio, however, represents the proportion of students irrespective of the classes studying in the specified age-group to the total population of that age-group. The age-specific enrolment ratio for the age-group 6-14 years works out to 58 per cent (66 per cent for the age-group 6-11 years and 43 per cent for the age-group 11-14 years).

It may be noted that the absolute number of non-enrolled children in the age-group of 6-14 years has remained somewhat stationary at around 450 lakhs for the last thirty years. Even taking the gross enrolment ratio, the magnitude of the non-enrolled in the age-group of 6-14 years in 1978 was 447 lakhs (149 lakhs in the age-group of 6-11 years and 198 lakhs in the age-group of 11-14 years) If we take age-specific enrolment figures then the magnitude of non-enrolled children in the age-group of 6-14 touches the figure 555 lakhs (285 lakhs in the age-group of 6-11 and 270 lakhs in the age-group of 11-14 years) The absolute number of non-enrolled children recorded some decline during 1950-51 to 1965-66. After 1965-66 this trend has reversed and by 1978-79 this number increased significantly The figures of the all India educational surveys need to be interpreted with caution as these may not present correct position because the estimates of population in specific age-group are of rough and ready nature and have not been projected by following well established scientific population projection methods.

TABLE 2

NUMBER OF NON-ENROLLED CHILDREN DURING 1950-51 and 1978-79

(Figures in lakhs)

Year	*Age Group*		*Total*
	6-11	*11-14*	*6-14*
1950-51	253	210	463
1960-61	152	289	441
1965-66	121	286	407
1973-74	150	281	431
1978-79	149	298	447

Note Figures for 1965-66, 1973-74 and 1978-79 are from All India educational surveys These are based on gross enrolment in lakhs.

Sources : 1 Government of India, Ministry of Education, *Report of the Education Commission 1964-66*, supplementary volume, New Delhi, 1970, pp, 16-21

2 NCERT (*a*) *Second All India Educational Survey*, New Delhi, 1967, pp. 188-189, 274-275, (*b*) *Third All India Educational Survey*, New Delhi, 1979, pp. 367-370: (*c*) *Fourth All India Educational Survey*, New Delhi, 1980, pp. 41, 58, 59

If the past is any guide, it appears that the task of covering the entire population in the age-group of 6 to 14 years with compulsory and free education, at this pace, will remain intractable with the existing set of policies and programmes even by the end of this century, i e 2000 A D

Education as a Concurrent Subject

Prior to the enactment of the 42nd amendment of the Constitution, making education a concurrent subject, the Central Government had probably an excuse for the tardy implementation of the Directive Principle on compulsory education. In this context observations of P.N. Kripal and V.S Jha, quoted in the *Report of the National Commission on Education* are worth mentioning. In their opinion :

> The experience of the years since Independence has shown that, for the lack of adequate authority at the Centre, national policies could not be implemented satisfactorily and that the excellent recommendations of many commissions and committees, in various fields of education, remained on paper Even the resolutions unanimously adopted by the conferences of Education Ministers and the Central Advisory Board of Education remained unimplemented The Union Government should be invested with legal authority in the field of education, which should appear in the concurrent list of subjects.

The Education Commission was, however, caught in the dilemma of propagating the "delicate balance between centralization and decentralization" as influenced by western liberalism and experimentation In an emphatic tone it asserts :

> We are not in favour of fragmenting education and putting one part in the concurrent and the other in the State list; education should under any circumstances, be created as a whole. We are of the view that in a vast country like ours, the position given to education in the Constitution is probably the best because it provides for a Central leadership of a stimulating but non-coercive character. The inclusion of education in the concurrent list may lead to undesirable centralization and greater rigidity in a situation where the greatest need is for elasticity and freedom to experiment One may question the rationale of looking at the Central leadership with suspicion and charging it as prone to assume coercive character and undesirable centralization and so forth

Singh (1977) also feels that the Union Government through various bodies like the NCERT, the Central Advisory Board of Education, etc. has been providing direction to school education. Even prior to the 42nd amendment of the Constitution, to quote Prof. Singh, "the Centre had an overriding interest in education" and with 42nd amendment of the Constitution "what was felt vaguely and realized indirectly has now been verbalized and put in black and white and has been recognized formally."[5]

Inclusion of education in the Concurrent List marks a great break-through in the powers of the Union Government to legislate in the matter of education Entry 25 of the List III-Concurrent List of the Constitu-

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[5] R.P. Singh, Education on the concurrent list—A historical analysis, *Education Quarterly*, GOI, MESW, April 1977, pp. 1-4 Prof Singh gives an excellent treatise on the subject He finds that (*a*) education before 1919 was "exclusively a federal subject," and (*b*) "education was given partly a provisional status in the constitution". "The 42nd amendment has merely restored what it otherwise enjoyed".

tion now includes "Education including technical education, medical education and universities subject to the provisions of entries 63, 64, 65 and 66 of List I; vocational and technical training of labour" Entries 63, 64, 65 and 66 in List I—Union List—include .

> The institutions known at the commencement of this Constitution as the Banaras Hindu University, The Aligarh Muslim University and the Delhi University, established in pursuance of Article 371 and any other institution declared by Parliament by law to be an institution of national importance (Entry 63)
>
> Institution for Scientific or technical education financed by the Government of India wholly or in part and declared by Parliament by law to be institutions of national importance (Entry 64)
>
> Union agencies and institutions for
>
> (*a*) Professional, vocational or technical training, including the training of police officers; or
> (*b*) The promotion of special studies or research, or
> (*c*) Scientific or technical assistance in the investigation or detection of crime. (Entry 65)
>
> Coordination and determination of standards in institutions for higher education or research and scientific and techical institutions (Entry 66)

The legislative implications of List I—Union List, List II—State List and List III—Concurrent List as spelled out in Article 346 are : only the Lok Sabha or Union Government can legislate on subjects covered by the List I —Union List, only State Legislature or State Government can legislate on subjects under List II—State List and on subjects under the List III—Concurrent List both the Lok Sabha and State Legislature can make law, with Union Legislature having a primacy.

With the inclusion of education under the Concurrent List the power of the Union Legislature on education has been considerably enhanced. The Centre can now come forth with legislation to allow it to play a more positive role rather than be concerned with providing general directions This would be evident from the provisions contained in Article 245 of the Constitution where Clause (1) states that

> If any provision of a law made by the legislature of a State is repugnant any provision of a law made by Parliament which Parliament is competent to enact or to any provision of an existing law with respect to one of matters enumerated in the Concurrent List, then subject to the provisions of Clause (2) the law made by the Parliament, whether passed before or after the law made by the legislature of such State, or, as the case may be, the existing law shall prevail and the law made by the legislature of the State shall, to the extent of the repugnancy be void.

Clause (2) of Article 254 states .

> When a law made by the legislature of a State with respect to one of the matters enumerated in the Concurrent List contains any provision repugnant to the provision of an earlier law with respect to that matter then, the law so made by the legislature of such State shall, if it has been received for the consideration of the President and has received his assent prevail in the State Provided that nothing in this clause shall prevent Parliament from enacting at any time any law with respect to the same matter including a law adding to, amending, varying or

repealing the law so made by the legislature of the State.

The Union Government can now take pronged action to promote education. There is no technical hitch on the part of the Union Government to enact appropriate laws for making education free and compulsory for children up to the age of 14, to carry out much-cherished educational reforms including enforcing the 10+2 pattern of education, linking education with work, needs of the community and national development goals. The 42nd amendment placing education in the Concurrent List, gives the Union Government umpteen powers for taking up all pervasive educational reforms. To be specific, some of the issues on which the Union Government can initiate a series of actions may be enumerated as follows :

1 The Union Government may enact legislation for providing compulsory elementary education to all children in the Union and thus ensure that the long-awaited implementation of the Article 45 of the constitution is enforced.

2 There is considerable heterogeneity in the structure and pattern of schooling. For instance, in Pondicherry there are five patterns of schooling, viz. French pattern (seven years of primary schooling and four years of high schooling); Kerala pattern (I-IV classes as primary, V-VIII classes as upper primary, and VIII-X classes as high school); Tamil Nadu pattern (I-V classes as primary, VI-VIII classes as upper primary and four years of high schooling), etc. The duration of school education also varies from 10 to 14 years Different states follow different practice regarding minimum age for admission, medium of instruction, compulsory examination which are in some instances more governed by convention than any rational justification. The far-reaching recommendations of the National Commission on Education and the National Policy Resolution on Education regarding restructuring of education have remained unheeded. The Union List can now effectively enforce the 10+2+3 pattern of education which has been accepted, in principle, by all states. In the new pattern the ten years of schooling constitute an integrated unit of undifferentiated education which may be sub-divided in a variety of ways (e.g. 4+3+3, 3+4+3, 5+3+2 or 5+2+3) according to local needs.

3 A variety of well-tried practices with respect to non-formal education, ungraded curriculum and open school can be adopted on a wide scale

4 As regards curriculum reforms the suggestions and guidelines developed in the approach papers—(*i*) The Curriculum for the Ten-Year School—A Framework, (*ii*) Higher Secondary Education and its Vocationalization, and (*iii*) Teacher Education Curriculum—A Framework—can be taken up without entangling in unwanted bureaucratic rigidities at State levels

5. The Union Government can play an effective role in achieving the long-desired coordination between the school and the university and introduce school-college-university complexes by promulgating necessary decrees.

All the steps enumerated above would go a long way in honouring the Directives enshrined in the Constitution and Resolutions of the UN Universal Declaration of Human Rights which states

> Everyone has the right to education Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. (1968, Art. 26 clause 1).

Again, the enforcement of legislation, policies and programmes is by no means an easy

task. This calls for unflinching commitment and support from policy framers, administrators, politicians and the community. The implementation depends upon persons vested with power and in democracies upon the willingness of the people. In a democracy like ours there are a host of pressures from various sources including formidable social constraints impeding the process of reforms. These need to be tackled. Early implementation of universalization of elementary education would be conducive in promoting growth with justice and enable the masses to discharge their Fundamental Duties with respect to (*a*) developing "scientific temper humanism and the spirit of inquity and reform" and (*b*) "striving towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement."

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Structural Characteristics of Classroom Questions, Pupil Responses and Pupil Response Management Behaviour of Social Studies Teachers

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CLASSROOM questions are potent means of pupil learning They are used for a variety of purposes in the classroom Due to their potentiality to realize different instructional objectives, the classroom questions have attracted the attention of research workers in recent times. Jangira (1980) provides an extensive review of researches conducted in this area in India and abroad The review reveals a trend of research studying classroom questioning behaviours in bits. The studies on comprehensive classroom questioning behaviour in its entirety have been called for. The present study is an attempt in this direction. The study purports to cover structural characteristics of classroom questions, their relationship with the type of pupil responses they elicit and the pupil response management behaviour of social studies teachers teaching Class VII.

Objectives

The present study purports to realize the following specific objectives :

1. To study the incidence and levels of classroom questions used by social studies teachers teaching Class VII.
2. To study the structural characteristics of questions used by social studies teachers teaching Class VII.
3. To study the relationship between structural characteristics of classroom questions and pupil responses
4. To study the relationship between pupil response types and pupil response management behaviour of

social studies teachers teaching Class VII

Hypotheses

In order to realize the specific objectives (3) and (4) above, the following hypotheses were formulated for testing :

1. Structural characteristics of classroom questions are significantly associated with pupil responses
2. Pupil response management behaviour of teachers teaching social studies to Class VII are significantly associated with pupil response types.

Specific hypotheses were not formulated for the first two objectives, since they are status objectives.

Procedure

The study covers 25 social studies teachers teaching Class VII in Delhi and Rohtak district of Haryana. Only teachers showing willingness to the tape-recording of their lessons were covered. One lesson of each of the 25 teachers was tape-recorded for analysis using the modified version of the classroom questioning behaviour observation system (CQBOS) developed by Jangira (1981). The tool is described briefly in Table 1.

TABLE 1

CLASSROOM QUESTIONING BEHAVIOUR CODING SYSTEM*

Area	*Category*	*Operational Definition*
Question function	1. *Management*	Questions ensuring understanding of the task related instructions and questions used for securing pupil attention
	2. *Substantative Business*	Questions directly related to content
Structural characteristics	3 *Relevant*	Questions relevant to content and the teaching situation
	4. *Precision*	Questions free from redundant words and phrases
	5. *Clarity*	Questions free from ambiguity
	6. *Correctness*	Questions which are grammatically correct
	7. *Level of Questions*	(*a*) *Lower Level* : Questions at memory level, recall or recognition questions
		(*b*) *Middle Level* : Questions which call for translation interpretation and application, levels of pupils in responding

Area	*Category*	*Operational Definition*
		(c) *Higher Level :* Questions which call for analysis, synthesis and evaluation abilities of pupils to respond
Pupil responses	8. *No Response*	Silence after the questions. No student come forward for responding
	9 *Wrong Response*	Incorrect response
	10. *Incomplete Response*	Whatever part of response has been received is correct, but it is not complete
	11. *Partially Correct*	Some part of the response that has been received is correct, while some is incorrect
	12. *Correct Response*	The criterion response envisaged by the teacher
Management of pupil response	13. *Acceptance*	Teachers' acceptance of the response verbally
	14. *Rejection*	Teachers' rejection of the response verbally
	15. *No Rejection*	The teacher either passes on to the other activity after the pupil response or he is silent
	16. *Prompting*	Questions providing a cue with a view to leading the pupil to the criterion response
	17. *Seeking Further Information*	Questions soliciting more response to guide the pupil to complete his incomplete response
	18. *Structuring Response*	Teacher statement directed to rounding off the pupil responses to summarization, elaboration and modifying language arrangement

*Adapted from Jangira (1979)

The coders of the tape-recorded lessons were trained in coding the lessons in terms of the categories of teacher behaviours comprising the tool. Inter-coder and intra-coder reliabilities were worked out The inter-coder reliability of 86 was achieved. The intra-coder reliabilities with a gap of one, two, three and four weeks ranged from .78 to .88 The reliabilities were considered to be reasonable.

Results

The data concerning the incidence and levels of classroom questions have been presented in terms of percentages. The length of questions was worked out in terms of the four quartile values. Chi-square test of independence was applied to the pairs of structural characteristics of classroom questions and pupil response types as well as pupil response management behaviour of teachers and pupil response types The results emerging this analysis are presented in this section.

Incidence and level of questions: The study reveals quite high an incidence of classroom questions. Average incidence of question comes to 28 per lesson of 30 minutes. The incidence is higher than Baden (1974) who reports 24 questions per lesson of 35 minutes' duration The incidence of classroom questions at different levels is shown in Table 2.

As expected, the questions at higher levels are asked sparingly, while the incidence of questions at the lower level is the highest. The finding is in line with Gallagher (1965), Guszek (1968), Scheiber (1967), and Brammer (1974)

Structural characteristics and pupil responses: Association between the paris of structural characteristics of classroom questions and pupil responses was studied through computing chi-square values for each pair. Table 3 gives the pairs, df, chi-square values and their significance level. It provides data regarding the first hypothesis. The response types are no response, wrong response, incomplete response, partially correct response and correct response.

TABLE 2

INCIDENCE OF CLASSROOM QUESTIONS AT DIFFERENT LEVELS

Level of Questions	*Total Frequency in 25 Lessons*	*Percentage Frequency in 25 Lessons*	*Average Frequency per Lesson*
Higher	16	2 32	0.64
Middle	48	6 97	1.92
Lower	624	90.69	24.96
Total	688	99.98	27.52

TABLE 3

STRUCTURAL CHARACTERISTICS OF CLASSROOM QUESTIONS AND PUPIL RESPONSES

Structural Characteristics	*df*	*Chi-Square Value*	*Significance Value*	*Findings*
Relevance and pupil response	5	40.86	.01	Relevant questions elicit more correct responses and irrelevant ones more 'no response' and wrong response situations
Clarity and pupil responses	5	161 07	.01	Clear questions evoke more correct and partially correct responses
Precision and pupil response	5	102 00	.01	Precise questions elicit more correct responses
Grammatical correctness and pupil responses	5	137.59	01	Grammatically correct questions elicit more correct responses
Question length and pupil responses	5	340.45	.01	Questions of average length elicit the highest number of correct responses, while short and lengthy questions elicit almost equal number of correct responses

Table 3 reveals significant "process-process" relationships between the structural characteristic of the classroom questions used by the teachers and pupil response types. The correctness of the pupil response can be considered as an immediate product criteria The table also reiterates the desirability of the five structural characteristics as components of the classroom questioning behaviour of teachers. The first hypothesis is supported by the data presented in Table 2.

Pupil response types and management behaviour of teachers : The pupil responses, as a material consequence, should determine the pupil response management behaviour of teachers. As a matter of fact, the two should have a correspondence with each other. With this logic in view association between the two was studied The pupil response types specified in the preceding section were studied against the six pupil response management behaviours of the teachers' teaching behaviours—prompting behaviour, further information seeking behaviour and response structuring behaviour Table 4 presents the results.

TABLE 4

PUPIL RESPONSE TYPES AND PUPIL RESPONSE MANAGEMENT BEHAVIOUR OF TEACHERS

Pupil Response and Management Behaviour	*df*	*Chi-square Values*	*Significance Values*	*Findings*
Pupil response and reacting behaviour	10	431.45	.01	59.25 per cent of the correct questions are accepted. While 40.74 per cent are not reacted to
Pupil response and prompting behaviour	5	111.35	01	Prompting is done in the case of 12 90 per cent no response situations, 40 per cent wrong response and 28.57 per cent incomplete response situations
Pupil response and further information seeking behaviour	5	75.51	.01	Further information seeking behaviour has been caused in 57 16 per cent of incomplete responses and 36.92 per cent of partially correct response
Pupil responses and response structuring behaviour	5	71.61	.01	The tendency to structure pupil responses is quite low. Structuring is used in the case of partially correct and incomplete response situations

Table 4 reveals significant association between pupil response types and pupil response management behaviour teachers, thereby, supporting the second hypothesis. However, prompting behaviour is comparatively in low key. Same is the case with structuring. This implies that some of the responses go unmanaged, i.e. they are either not reacted to or other management behaviours which ought to have been are not used. This calls for a training programme for incorporating the desirable pupil response management behaviours in teachers. Training approaches and training materials developed by Jangira 1979, Jangira and Singh (in press) and Jangira (1981) will be quite useful for the purpose.

In summary, the incidence of classroom questions requiring higher level of mental thinking is very low; there is an association between the structural characteristics of questions asked by social studies teachers covered in the present study and pupil responses; and there is an association between the pupil responses and pupil response management behaviour of teachers. The details about the associations are available in Jangira (1981). However, some of the response management behaviours are used in low key. The teachers require training in improving their pupil response managemet behaviour.

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Towards a Framework for Distance Education in Developing Countries

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This article is primarily based on ten years' personal experience, knowledge and assessment of the functioning of correspondence course in India

As the multifaceted role of education in the development process has come to be recognized by the developing countries as the most potent single factor, they everywhere are not only launching massive drives to open greater vistas of education for their rapidly increasing populace but are also planning to provide opportunities for 'second chance' education and training for those who remained deprived of formal education or who need further education and training specific to their vocations and aspirations. Though formal education is still regarded to be most prominent mode of delivery, yet by now the increasing importance of the informal or non-formal system as the most viable complementary adjunct to the present education system has been accepted without the past murmuring skepticism. The institutions providing for correspondence education or distance education off the campus are increasing in number and gradually diversifying their educational activities to the changing needs of the societies of the developing countries. However, these corresondence institutes that are emerging in the low-income group developing countries are neither the exact replica of institutions developed in the West, the pioneer in the field nor have these been organized on correct assumptions and rationale. No wonder the system of distance education in these countries in sociological perspectives still continue to be called by many as 'marginal', 'peripheral' to the real business of education, and is being dubbed by the die-hards as a system in which "inferior courses are taught by inferior teachers

to inferior students "[1]

Any evaluation of the present system of correspondence education and any attempt to draw a conceptual framework for practice in distance education in the developing countries would necessitate the examination of their peculiar circumstances and situations. They on the one side make imperative the adoption of the system of distance education as the most viable alternative and on the other side put a number of constraints in adopting the western model as such

In the developing countries, the problem of 'pupil explosion' has assumed a great magnitude and the demand for education largely overwhelms the supply of physical resources Many factors have contributed to this phenomenon. The emergence of the new concepts of development and a growing egalitarian spirit favouring democratization in the distribution of education, the greater recognition by the leaders and planners of the fact that education is a factor of multi-dimensional development of which man is both the end and the instrument[2], and that widely diffused educational activities provoke and facilitate change in the prevailing socio-political conditions by providing the otherwise disadvantaged persons with a degree of social and economic mobility to break through the traditional barriers—all have directly or indirectly resulted in a greater demand for education Besides the lack of physical and financial resources, as there are unequal educational opportunities based on sex, socio-economic status and different regional, rural, urban and, sometimes, ethnic background, this increasing demand for education has to be met in such a manner that on minimum costs it may lead to the equalization and expansion of educational opportunities and bring about rural, urban, and regional balanced and integrated development, and cater to the mass and not only the elite of the society. The formal system of education which alone is no longer regarded as a panacea for all the ills of the educational world even in the developed countries, would not, indeed, touch the fringe of the growing dimensions and magnitude of the problem of the developing countries. As already mentioned they not only lack the financial, physical and human resources but the geographic and demographic conditions, i.e. vast distances, low density of population, harsh environment, and poor communications make the solution through conventional channel alone an impossibility in the near future Thus the adoption of informal and non-formal modes along with the formal as an integral part of the educational system is a sine qua non.

As in many developing countries the present system of correspondence education is haphazardly developed and imitatively introduced, the question that crops up is what should be the well conceived and properly planned model for the developing countries vis-a-vis the developed To resolve this issue the question of priorities, working definition of distance study, its goals and objectives, target groups, organization and administration, choice of media, etc. are to be properly investigated in the light of peculiar circumstances and situations, and financial-physical-resource constraints.

As in the developed countries the system of distance education has grown as a well-nourished child on comparatively very well planned lines, the priorities and aims with regard to the area, courses, professions and skills and the clientele to be covered are well delineated. However, in the case of most of

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[1]Fred Harvey Harrington, Knute O Broady Memorial Address. Distance Education in the World's Future *Proceedings of the International Council for Correspondence Education. The system of distance education*, Vol 2, p 8.

[2]*Education Sector Policy Paper*, Washington, World Bank, 1980, p 14.

the developing countries, the system of correspondence education or continuing education was implanted as an expediently attractive innovative experience or experiment from the West Neither national educational priorities were taken into view nor was any correct assessment of the needs of the society made. Naturally thus the system or the technique slipped mainly into a traditional rut. To pull the system out of the conventional moorings and to pat it on lines consistent with the needs of the society and the national priorities of equity, equalization and expansion of both general and professional educational opportunities, the priorities, assumptions and rationale of the system need to be redefined While the population of the developed world has already attained a great degree of equity and expansion in the field of education, and the percentage of enrolment in these countries is 94, 86.5 and 30 per cent at the primary, secondary and tertiary levels, respectively, compared to 64, 38 and 8.7 per cent in the developing countries.[3] The concept and purpose of distance education in western countries thus more revolves round the idea of refurbishing and refreshing the acquired knowledge and keeping abreast with latest development in their fields of skill and specialization. Comparatively a small clientele is seeking knowledge through distance education with the it-might-help-him assumption. Distance education in the developed world is primarily of the nature of continuing education. Whereas the concept and purpose of distance education in the developing countries has to be of the nature of 'bridging gaps', maybe socio-economic, rural and urban, geographic, demographic and primarily one concerning physical and financial resources at the individual and national levels. The only purpose that predominates with the majority of clientele is that degree might help him. And the scope of distance or continuing education as provided by the existing educational institutions is very narrow, and implementation makes matters even worse. The use of devices technologically made possible to span the distance between the educators and learners, e.g. radio, TV, tape-recording and films is neither being significantly made at the local or the national levels nor is their use being planned on a vast scale in the near future. If any system such as the adult literacy drive is initiated at the national level it boils down to the passing of the buck, and if the initiative is local it tends to take a mould peculiar to the thinking and whims of decision-making agencies who most of the time in order to protect their vested interests take no pains in the innovative systems except to project that they are neither any match of the existing system nor would they serve any useful purpose It is partly because of this and partly because of the lack of acceptance of the system by the nation and the coordinating agencies that the correspondence institutions are suffering and are being reduced to inferior channels.

Obviously in the present context, the working definition of distance education in low-income developing countries like India could not be more than an innovative system borrowed and implanted in the image of the western model without national, governmental and social (except by those directly involved) acceptance, and organized in the manner permitted by the local decision-making agencies within the purview of the resources raised to cater to the clientele readily available with no cherished and preconceived goals.

The framing of any new model that would be successful in terms both of a system and the national ends must necessa-

[3] *Education · Sector policy paper.* Washington, World Bank, 1980, pp. 112-13

rily vouchsafe the acceptance of the system by the nation, i e the nation or the government or the coordinating agencies are a willing party to provide for and develop the system. Secondly, if it is to conform to the national priorities and goals and work within financial-physical-resource constraints, it must provide for both centralized and decentralized planning. The centralized planning should concentrate on framing broad obligatory guidelines to serve the national ends and to construct the programme within the national financial-physical-resource constraints but must also provide the bare minimum for the system to function and not to limp with or without crutches. Third, the model envisages a close rapport between the academic and media controlling agencies—their willing, obligatory, well-coordinated, specialized and exclusive channel-oriented service to the system. It is high time that the Government of India initiates measures to establish exclusive relay stations both at the national and local levels, if not televarsity (which might not prove useful to the masses as yet) for academic programmes Fourth, a network of study centres, which will serve as library-cum-audio-visual-cum-tutor-counselling-cum-adult literacy centres should be given top priority so as to ensure equity of opportunities and amenities in the various regions and in the rural and urban areas, and between the comparatively economically better off and the weaker sections of the society Fifth, to reduce costs the model purports to ensure, maybe through a central directive, a minimum functional cooperation amongst the various local and regional units Sixth, important ingredient of the model is both the functional and financial autonomy within the university structure if these are to stay as a part of the campuses. Last but not the least, the model conceives of a faculty committed to the system and well conversant with the educational technology evolved from time to time to meet the needs and requirements of both the society and the system, and definitely not a faculty, the members of which will make correspondence courses as a 'jumping board'. □

The Human Aspect of Systems Design in School Management

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IF MAN ever conceived of systems in business, industry, education or any form of management, it was because he observed the elegance of the systems in nature, the smoothness of their operation and their meaningfulness in life. The term 'systems', however, entered our vocabulary with the development of the science and art of business management. But the idea of being 'systematic' is an old one, dating back to the dawn of civilization when cities were built, monuments constructed and society began to be organized. Because educators deal with that dynamic and highly variable creature, the human being, we tend to believe that the science of systems management is not clearly applicable to schools. This may be one of the reasons why some schools are poorly managed.

It is thus all the more important for school administrators, managers or principals to view their institutions as a systems model, consisting of smaller systems within greater systems. What is a system ? We may define it as a conscious linking of interrelated and interdependent components, producing a facilitating effect in the carrying out of one or more processes to achieve the desired end. If we want to manage our educational institution better, we must first be highly conscious of the aims of the institution. As Aristotle rightly pointed out over two thousand years ago, the prime *cause* of anything is the *end* for which it exists and towards which it moves. So the first step in designing an effective system is to : (*i*) *state the goals*, and (*ii*) *define the objectives* which the system aims to achieve.

If our goals and objectives are to be truly relevant and meaningful we must first analyse human needs. A school manager who designs any part of the school, be it the curriculum, the office procedures or even the tea service, without taking account of human *needs*, will find that his whole system fails. He will encounter resistance, conflicts,

lack of cooperation, and a sense of frustration both in himself and in all the other persons concerned. Once the aims and objectives are chalked out, the next stage is to design processes to meet those aims and objectives The best way of designing processes is to study the existing system, if any, conceptualize a fresh structure, and select methods or means of achieving the desired goals.

If the manager who designs the system happens to be a physical scientist, with no understanding of human psychology and lacking the perception to sense human strengths and weaknesses, and if he is altogether unconscious of individual differences, the processes or methods he proposes will fail. A good manager, therefore, has to be a good psychologist, and must possess breadth of vision if the systems he designs are to be successfully operated by the people involved in the process.

The final stage in designing a system is to build in ways of managing a system, namely, to (*i*) *control it*, (*ii*) *evaluate it*, and (*iii*) *modify it*. In this sense, the school administrator has to be open, objective and highly flexible, so that he does not interfere with the system while it is in operation, but has the power to judge the effectiveness and modify it accordingly, to ensure that the aims are surely achieved. He has to see that these aims, if met, will fulfil the psychological and social needs of the parents, pupils, teachers, officials and others involved in the educational system.

In this emergent society of ours there will always be managers and the managed The chief of an African tribe, a politican, the managing director of a company, a foreman, a headmaster are all manifestations of man's desire to range behind some sort of leader who will accept responsibility, understand them and work out systems that will serve their needs and interests. But if this manager considers himself a mere technician who drafts plans, programmes and procedures without caring in a sensitive way for the people concerned he will soon be overthrown The systems analyst may be a mere technician, but there is much heart-searching as to what systems *designing* is all about. The African chief finds himself borne along on a tide of demagogy; the politician is at the mercy of the so-called 'free' press. The school principal is the target of murmur and dissent when he tries to be firm about policies and programmes The effective manager then is one who moulds his system with the pliant material of human psychology and imbues it with visions of the evolution of the human soul towards perfection. Such a manager cannot treat the people in his systems as the behavioural psychologists might, expecting them to respond in a set way to certain stimuli.

A good manager keeps modifying the system to suit the changing society it serves, as well as the individual abilities of those who man the system from time to time. All the theories that go into the training of a manager, all the terminology and techniques like PERT (programme evaluation and review techniques), LOGOS (language for optimizing graphically ordered system), CPM (critical path method), PEM (programme evaluation measures), cybernetics, input, feedback loops, and so on can be of little use if human qualities are lacking in the manager himself. These human qualities make a manager sensitive to the psychological needs of others, so that the systems he designs and controls are humanly satisfying to all those involved.

The neatest model of these human needs lies perhaps in Maslow's motivation theory. Maslow has drawn human needs on an ascending scale from the most basic needs to the highest spiritual needs. On the lowest rung are the *physiological needs* of food,

shelter, sleep, sex, comfort. Unless these are duly fulfilled, man cannot rise to the next rung in which he needs a *sense of security* If the person is secure, then he seeks *love.* At the fourth plain, he seeks *self-esteem* and *recognition*, and at the highest plain he desires *self-actualization.* It is at this point that the human being becomes a creative individual.

The system a manager designs must cater to all these motivational needs of the people, right from the bread-and-butter needs to the soul-expressive forces If the system gives scope to the most creative individuals it touches, then their creativity is bound to lead to changes in the system itself. The enlightened manager is open to such change and in fact encourages his staff to design better and better system. In short, he gradually makes himself indispensable. While retaining his leadership role, he becomes more of a friend, philosopher and guide The best manager or school administrator never sets himself on a pedestal. His personal qualities are both humanitarian and yet objective

Compassion, for example, the ability to understand with both head and heart the personal problems of the man or woman who comes for counsel, is a quality that is compounded of humility and psychological insight. Rarely does one meet cases of managers of high calibre who are not possessed of the gift of compassion to a high degree. When adjectives like 'ruthless' or 'hard-hearted' are applied to a school principal or supervisor, it is pretty certain that, however successful in the short term may be the operation he manages, in the long term no really sound system is being built. The atmosphere under such a system is one of stress and strain, of shocks and uncertainties: in a word, of insecurity. And there the very second rung of Maslow's motivational scale crumbles.

The manager who can, by a combination of character and ability, diffuse a sense of ordered calm and planned progress, is assured of loyality and esteem. The system he designs will obtain the support of those operating it. At the other pole to 'compassion' lies the top-rating management quality. ablity to think clearly. A muddled mind creates muddles around it, and no 'system' can emerge from a muddle. The fountain-head of an elegant system is clarity of mind, and this in turn springs from concentration, which is in itself a vital discipline for a systems designer.

Clarity in designing and managing a system is often based on up-to-date professional knowledge, technical expertise and management training—but the best manager has wider horizons He tries to achieve 'wholeness', that is, to be complete in himself—not perfect but complete. This completeness is a paramount gift. There are echoes here of Jan Christian Smuts, with his study of holism and evolution[1] Smuts believed that every system is a unity, a centre of activity dominated by one fundamental property. It is this ultimate internal unity that shapes the innumerable systems in life into one orderly and harmonious whole His idea of holism as an attempt at synthesis, suggests that the whole is greater than the sum of its parts, and that the manager should not lose sight of the whole in designing the components of the system. It is just in this wholeness of outlook that the school manager becomes humane, and uniquely contributes to the welding together of the hopes and fears of all those he is managing, namely pupils, teachers, supportive staff, the general public, and even the school trustees or governing body.

How is he to achieve this 'wholeness' himself so that his systems are imbued with it too ? The answer is that everything should be of excitement and interest to him. Pre-

judice, preconception, dogma and bigotry should be anathema to him He should strive all the time to ripen his mind by reading many books, seeing as many plays, paintings and films, listening to as much music, visiting as many new places, and talking to as many people as time will allow. This attractive catalogue of activity will help him rise above the 'routines' of his job. The breadth of vision and diversity of interests thus generated will enable him to step out of the system he has created, and view it from god-like heights to judge whether it contributes to achieving the ultimate human purposes. At this point the school manager turns a philosopher ! □

Teacher Sex and Classroom Interaction

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TEACHING and learning constitute two major aspects of any system of education. Of the two, learning aspect has received considerable attention of behavioural scientists. A peep into the history of educational psychology reveals that the educational problems in the schools of France laid emphasis on the study of learning, memory and intelligence. The problem of students who did not gain from instruction was looked at from the point of learning rather than that of teaching. "Although Itard and Seguin grappled with the problem from the standpoint of teaching, the limelight was stolen from them by Binet who made it a matter of intelligence" (Mitra 1972). Later the researchers like Barr, Ryans, Gags, Flanders, Smith, Bellack, etc. emphasized the importance of teaching in the learning of students.

It is now realized that a teacher's behaviour is an important variable in the teaching-learning process. The communication process between a teacher and his students has been found to be chiefly responsible for the proper educational growth of students. This is so because classroom climate is crucial to learning process. The learning on the part of students depends to a large extent on the socio-emotional climate in the classroom. The verbal behaviour of a teacher creates the climate of freedom or restriction for the pupils in the classroom. A teacher's behaviour, therefore, sets the climate and conditions the learning of pupils to a large extent. With the realization of the importance of socio-emotional climate of the classroom generated by teacher-pupil interaction, the study of teacher's behaviour has gained importance.

Realizing the importance of teacher behaviour in the classroom, researchers made attempts to identify the characteristics of 'successful' and 'unsuccessful' teachers. The dominant theme of these studies has been the search for the good teacher. In these studies, the personality and intelligence test scores, etc. were related to marks in teaching practice and in theory The outcome of these studies has usually been that

teachers who are rated high manifest a wide range of personality and cognitive characteristics. One of the major drawbacks of studies conducted has been that the tools of measuring teacher effectiveness have been rating scales which are high inference measures Medley and Mitzel (1963) also concluded that much of the work on teaching effectiveness must be discarded as irrelevant either because the criteria of teaching effectiveness were invalid or because no objective measures of teaching behaviour were used.

Flanders has made and important contribution in the measurement of classroom interaction objectively by devising a category system known as Flanders' interaction analysis category system. On the basis of several correlational, field and experimental studies, Flanders (1965) concluded that indirect teacher influence is positively related to pupils' achievement. These findings have been corroborated by a number of investigators (Lashier 1965, Morrison 1966, John 1967, Powell 1968, Gardner 1973 and Lulla 1974, etc) In India, Santhanam (1972), Roy (1973), Malhotra (1975), George (1975) studied teachers' behaviour in relation to age, sex, recency of training, teaching experience, professional status, qualifications, etc. But these studies have failed to provide any conclusive results

Collins (1973) conducted a study on Australian teachers and found the female teachers more traditional and formal in this approach to their profession. This indicates that male and female teachers may differ in their teaching behaviour. The present study makes an attempt to determine whether there is any significant difference between male and female teachers with regard to their teaching behaviour, i.e indirect teaching behaviour

Sample

The sample of the study consisted of 100 trained graduate teachers in science working in 33 higher secondary schools of Delhi These schools were selected randomly. Of these 100 teachers, 57 were men and 43 women These teachers were in the age-group 23 to 44 years and most of them were B Sc. B.Ed.

Tool Used

The Flanders' interaction analysis category system was adapted to encode the classroom behaviour of teachers included in the sample The Table shows the significance of difference between male and female teachers with regard to ten dimensions of classroom interaction. The significance of difference between means of these ten dimensions of classroom interaction of male and female teachers was determined by the use of t-test

Discussion of Results

The Table on page 50 shows that there is a significant difference in the teacher talk of male and female teachers. Male teachers talked more than female ones. Similar findings have been reported by Santhanam and George in their studies Santhanam (1972) found male teachers talking more (66 per cent) than female teachers (62 per cent). George (1975) also reported significant difference at .01 level between teacher talk of male (70 046 per cent) and female teachers (63.375 per cent) Student talk, as given in the Table, has been more in classes under female teachers than under male teachers and the difference in the student talk in classes under female and male teachers was found significant at .05 level. Santhanam (1972) and George (1975) reported similar findings in their studies Santhanam (1972) reported that student talk was 24 per cent in classes under female teachers and 20 per cent under male teachers George's (1975) study also revealed that there are more student talk in classes under female teachers (17.778 per

TABLE

SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF VARIOUS DIMENSIONS OF CLASSROOM INTERACTION OF MALE AND FEMALE TEACHERS

Sl. No.	*Dimension of classroom interaction*	*Female Teachers*		*Male Teachers*		*'t'*
		Mean SD	*Standard error*	*Mean SD*	*Standard error*	
1.	Per cent teacher talk	77.1418 5.558	0.848	80.0103 5.731	0.759	2.31*
2	Per cent pupil talk	10 7883 4.475	0 682	8.9596 3.148	0.417	2.40*
3.	I/D (indirect/ direct) ratio	0.1870 0 110	0 017	0.1714 0.091	0.012	0.77
4.	i/d (indirect/ direct) ratio	0.8009 0.379	0.058	0.9814 0 641	0 085	1.64
5.	Per cent confusion	0 8535 0.682	0.104	0.8053 0.943	0 125	0.28
6.	Per cent teacher convergent questions	7.4163 2.975	0.454	7.1228 2.702	0.358	0.51
7.	Per cent teacher divergent questions	0.8791 1.209	0.184	0.5596 0.790	0.105	1.60
8.	Per cent teacher acceptance of student ideas	1.7372 1.789	0.273	1.7105 1.251	0.166	0 09
9.	Per cent teacher using student ideas	0.7070 0.781	0.119	0.8544 1.100	0.146	0.75
10.	Per cent silence on account of student thinking	3.5907 2.062	0.314	3.3842 1.796	0.238	0.53

* Significant at 0.05 level

cent) than under male teachers (14 254 per cent) He also found the difference significant at 0 05 level. From this it becomes evident that female teachers talk less in the classroom than male teachers and the former generate a greater amount of student talk than the latter. There could be many reasons for these findings.

One possible reason for higher teacher talk of male teachers could be that male teachers may be having better mastery over the subject-matter than female teachers. Because of this, they may be making the students understand the subject-matter more properly through more explanations Since they may be explaining more than female teachers, they talk more than female teachers

It can be inferred that a geater amount of student talk in classes under female teachers than under male teachers may be due to the reason that the former give their students more freedom to talk than the latter.

The male and female teachers, however, do not differ significantly with regard to the remaining eight dimensions of classroom interaction I/D and i/d ratios are the main indicators of a teachers' indirect/direct behevavour The results of this study show that there is no significant difference between male and female teachers in respect of these ratios. Since these ratios are the major criteiia of determining the indirect or direct behaviour of teachers, it may be concluded that there is no sginificant difference between male and female teachers in their teaching behaviour, i e indirect/direct teaching behaviour.

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Teacher Selection

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ALTHOUGH the literal meaning of selection is choosing those individuals who are best suited to fulfil a given function, it can also, and this is perhaps its primary sense as far as future teachers are concerned, mean identifying those who will do no active harm.

There are other reasons for selection too. Sometimes it is imposed by circumstances, as when the number of places to be filled in training establishments is limited. Sometimes it results more directly from the desire to open the profession only to those whose philosophical or political options are acceptable to the authorities.

We feel that the first reason put forward is the only justifiable one: to find the men and women who are likely to serve the 'learners' best. Education is the key to man's adaptation to his culture, a path to freedom, the door to knowledge and wisdom. Does it not deserve our full attention?

But in many places are not bus-drivers subjected to more rigorous selection procedures than teachers? While the former can certainly endanger the lives of a few dozen passengers, the latter can stunt the minds of thousands of children

Furthermore, while a poor craftsman loses his customers and a bad driver is soon dismissed, in most countries in the world a teacher is often appointed for life without his real aptitude ever having been carefully established. And how many teachers thus appointed by the state will be dismissed for serious professional faults ?

In short, there is no lack of justification for teacher selection. The problem is to do it properly.

To Select is to Predict Professional Success—the Mechanism of Prediction

For prediction two things are necessary; knowledge of the phenomenon whose future is to be predicted, and knowledge of the

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predictors, i e. the signs and symptoms.

When a layman is asked which is the more difficult to assess, the phenomenon or the predictors, the latter are generally considered the more difficult, if not the only aspect really calling for reflection and research

This reply is perfectly correct in the case of material facts of which we simply wish to announce the arrival : to know whether it is raining or not is easy, indeed self-evident ; to predict rain is much more complicated. But as the phenomena become more complex and dynamic, and particularly where man is concerned, the reverse tends to be the case ; it becomes more difficult to describe the phenomenon in an operational way than to predict it. This is because once the criteria that enable us to say that the phenomenon has occurred are known, powerful statistical techniques allow a great number of possible predictors to be tried out very rapidly—and without necessarily worrying very much about a direct cause-and-effect relationship —until some are found that are reasonably effective, and the collection or measurement of which is as economic as possible. The procedure of trying absolutely anything as a possible predictor remains exceptional however· a theoretical knowledge of the phenomenon to be predicted generally gives a clue to prodromes, but in many cases a certain empiricism is none the less inevitable, given our limited, not to say rudimentary, knowledge of the human sciences.

Let us take a simple example first of all It can be admitted that a person is able to read if he obtains a certain minimum score in a set of tests including questions involving decoding, comprehensions, etc. In this case, 'able to read' corresponds to a clearly defined criterion. In order to predict how long it will take a child entering primary school to learn to read if his teacher employs a given method competently, we shall try such predictors as exact age, ability to reproduce certain patterns, etc. It is by no means certain that these predictors represent the most important determinants or derive from the most direct explanatory models of the process of learning to read, but, in practice, they prove effective.

Let us now consider the problem of predicting who will make a 'good teacher' or even, more modestly, a teacher who will do no harm This forces us to define what makes a 'good teacher' in an operational way, i e. according to precise criteria that can be directly observed and measured.

There was a time when a teacher was considered sufficiently qualified if he had learnt and understood what he had to teach (and possibly no more than that, as was sometimes required of nineteenth-century teachers) and was capable of imparting this knowledge by applying a codified set of pedagogic procedures centred on the subject-matter that the pupils were to assimilate passively.

Prediction of this kind of ability is comparatively easy. It suffices to recruit candidates who show that they already possess a good deal of the knowledge to be acquired and passed on, can express it in the language approved by the educational authorities and have a command of deductive logic and an orderly and thorough approach. The nature of the selection examination is thus already clear It just remains to check that the candidates show no infirmity or symptoms of serious physical diseases

Selection tests of this sort have been in existence for more than a century and are still going strong in many places. Unfortunately their real predictive validity has now become so doubtful that one eminent researcher recently wondered whether substituting the candidates' shoe size for their examination marks would really make much difference.

Certainly an examination of candidates' knowledge is not totally useless Amongst other things, it can be expected to keep mental defectives out of the teaching pro-

fession, but is this not rather a limited ambition? Hundreds of research studies demonstrated the weaknesses of the selective examinations for entrance to teacher-training colleges or the institutions that have replaced them [1] At best they predict more or less accurately success in the early stages of training. But even brilliant marks in the final examinations do not by any means herald success in the profession.

In order not to bombard the reader with figures, we shall limit ourselves to recalling the general conclusions drawn from the wealth of practical experience acquired in Scandinavia and the hundreds of studies that have accompanied it [2]

For twenty years (1948-68), the tests used in Sweden included writing a dissertation, a test of expression (narrative and descriptive tests), free activities with children and collective tests concerning attitudes towards the teaching profession.

The calculated correlations by E. Malmquist[3] between each of these tests and the mark for professional competence at the end of teacher-training studies showed very poor predictive validity.

In Finland, M. Koskenniemi[4] followed seventy-two teachers from their selection for training until ten years after the start of their professional careers. Here again, he found scarcely any correlation between the selection tests and success in the profession. 'A common trait amongst the least successful teachers was their lack of understanding of children and their inability to structure a teaching situation'

At the end of their analysis of the Scandinavian results, Marklund and Gran conclude 'There is no simple unambiguous "teacher aptitude" existing independently of situational factors "Unsuitability" as a teacher seems easier to define. Selection for teacher education should therefore be aimed primarily at avoiding presumptive failures'.

But What is a 'Good' Teacher?

To try to select teachers by means of a test that is relatively simple in its conception and the same for all candidates, is tantamount to saying that there exists one type of suitable teacher, capable of being predicted economically. Nothing could be further from the truth

In the abstract,[5] the best teacher is the one who enables his pupils to learn the most in the best way.

But what sort of learning is involved—cognitive, affective or psychomotor, simple or complex, lasting or ephemeral? It is generally accepted that some intellectual processes are more worth while than others. Analysis, synthesis, problem-solving and creativity occupy higher places than memory in the hierarchy of intellectual processes. Attitudes and values are also very important, and many of them appear and form or reform only slowly: the achievement of independence, tolerance, social sense, curiosity of mind, etc.

The teacher cannot aspire to arouse all these learning experiences himself but neither can he arbitrarily limit his activity to a single sector (which in the past has all too often been that of knowledge).

Certain of these experiences should in any case go together acquiring knowledge and feeling an interest, a growing liking for the field one has chosen to study.

A vital consideration is that teachers (like their pupils) are never neutral beings, capable of being entirely given over to particular theories or practices—in teaching or in anything else. They are endowed with a personality that is in part invariable, and this personality determines their teaching style to such an extent that a typology can be derived from numerous studies.[6] *Grosso modo* it establishes :

Type X—Interested above all in developing the child's personality, through empha-

sizing affective and social factors Follows a flexible programme, without worrying too much about the subject-matter covered Informal teaching method, as individualized as possible Warm, friendly

Antitype· distant, egocentric, reserved

Type Y—Is concerned only with the intelligence of his pupils Sticks to the subject. Follows a detailed, logical programme Sets high standards. Uses very strict tests of knowledge acquired Distant, his only relations with the pupils are professional

Antitype: disorganized, negligent

Type Z—Stimulating, imaginative Tries to ignite the spark that will give a few pupils the energy, freedom and skill to express their creative genius Is not concerned with intelligence in a restricted, traditional sense. Tests are of a somewhat uneven strictness. Reactions towards pupils often dictated by personal feelings

Antitype· dull, routine

X, Y and Z are rarely encountered in the 'pure' state; it is rather a question of more or less pronounced dominant traits. X, Y and Z can all be 'good' teachers. Y is the best for imparting knowledge, Z gives more emphasis to understanding ? Are X, Y and Z negatives necessarily bad teachers ? Even this is not certain, at least in certain respects

Good Teacher for Whom ?

One is not a good teacher in absolute terms, but with respect to a particular situation (including the material to be taught) and particular students. It is exceptional to suit everybody. One teacher is simulated by huge audiences, while another is only at his best in small-degree seminars

> The quality of learning in a given instructional situation is the result of *particular* instructional procedures employed by a *particular* instructor for *particular* students with *particular* goals in mind.[8]

The conclusion is obvious there is no single and universal type of good teacher, but many different types, who differ not only from one culture to another and from one degree of socio-economic development to another, but also within each cultural situation, according to the objectives pursued

An Operational Definition of the Standard Types

In the predictive system which teacher-selection represents, we call 'standard types' or 'target types' the descriptions, in terms of observable behaviour patterns, of different types of teacher that we hope to find in schools, or that we are prepared to allow in schools. Unless we can define these target types, selection operates completely in the dark

Whoever tries to formulate the necessary definitions meets with two major difficulties: the multiplicity of possible models and the serious shortcomings of models defined by means of expected performance

The Multiplicity of Models

All the combinations of types X, Y and Z that are to be found in each individual are further differentiated by other personality characteristics of the teachers (including their degree of social adaptation) and by the dynamics of the teacher-pupil relationship. There is thus a virtually unlimited number of acceptable teachers, to the extent that, in the final analysis, each situation, each individual, differs from all others.

In such a case one can only work with very broad approximations, retaining the smallest possible number of general models, within which it is agreed that individual differences do not constitute a 'danger', by which we mean a threat of serious depar-

ture from the desired educative action.

Let us imagine one of these models the X-dominant teacher.

> *Affective sphere.* Easy to approach. Behaves towards the pupils in a friendly way, without undue familiarity, however Ability to identify, to listen. Inspires confidence, reassuring. Optimistic
> *Cognitive sphere.* Well-balanced aptitudes: practical sense, moves without noticeable difficulty in the realm of symbols; verbal fluency average or above, social intelligence above average (aptitude in the sphere of social behaviour, in the Guilford model) Knows the subject-matter well, but does not make it the centre of his activity. Attaches less importance to the objective content than to affective reactions to it. Digresses on his own personal experience, even when having no connection with the subject laid down in the programme Behaviour in assessing the pupils: very subjective, rather lax Gives children confidence Encourages children in difficulty.

First remark. a traditional selection examination, focused on knowledge, verbal elegance and ability to solve theoretical problems, will tell us virtually nothing about any of the components of this target model And neither an interview of a few minutes nor the necessarily brief observation of the candidate interacting with a child or adolescent will provide enough additional information to complete the picture.

Clearly, in order to be able to identify the type of personality corresponding to this model it would be necessary to resort to such techniques as group discussion, attitude scales, evaluation of behavioural intentions, the Q technique and the semantic differentiator.

But two questions are left unanswered by such an examination· Does the information obtained in this way allow the subject's actual behaviour to be sufficiently accurately predicted (measurement of behavioural intentions probably does, but up to now its validity only seems so be established for the short term) ? The initial training of infant-teachers starts betwen the ages of 15 and 18, depending on the country Can the reactions of an adult in a teaching situation be predicted at this age ?

Furthermore, it must not be forgotten that we are thinking here of a selection examination likely to be open to a great number of candidates Now the example we have just given concerns only one target model, while the examination will investigate candidates not one of whose characteristics is known in advance (and perhaps should not be known, for the sake of equity). Consequently, all the target models, not just one, must be taken into consideration

One can imagine the duration and complexity of a test covering both knowledge (which is still necessary, let us not forget) and affective and cognitive characteristics (including creativity) This brings us to the chasm that separates the theoretically conceivable from the feasible

The Problem of Training and hence of Selection in Terms of the Desired Skills

Is there any need to point out the shortcomings of traditional teacher-training programmes in three sections: systematic training in the subject-matter to be taught, general knowledge, and training in psychology and teaching methods ?

In some periods—depending mainly on the qualifications of the students embarking on training—and some colleges, the subject-matter and that alone is taught (the teacher being expected to know as much as his future pupils will have to know) or, at the other end of the scale, the subject-matter is

only studied at the highest level (on the assumption that if the teacher can master the most complicated aspects of his subject he will surely be able to cope with the most elementary level) The latter approach is adopted by many universities, for secondary teacher-training in particular.

Everything has been said and defended in the name of general knowledge, including memorization of the birth-dates and genealogies of the great men of this world

Courses on psychology and teaching method consisted in the past—and there are still some fine surviving examples—of memorizing psychological notions (which had no demonstrated connection with teaching and were never translated into action in the field), of studying teaching methods based more solidly on the social order to be defended or the delusions of their supporters than on experimentation, and finally of assimilating model lessons and various tricks of the trade These prefabricated lines of conduct are nowadays condemned and rejected by progressive training-college lecturers, which, in the worst of cases, leaves young teachers even less well equipped than before

The functional relationship between the different components of this programme and teaching proficiency is far from proven, but in making student-teachers learn a bit of everything the tacit assumption is that they will find something useful in this hotchpotch and that the other things, which are not likely to do any harm, will at least serve to exercise the mind and form the character.

As a reaction against this encyclopedic impressionism, and more particularly under the influence of behaviourism, attempts have recently been made to work out training programmes directly related to the desired teaching skills and performances, in both the cognitive and affective spheres.

This approach is attractive for two reasons. On the one hand it gives a practical guarantee; at least we can be sure that teachers successfully trained by this method will be able to fulfil the educative functions judged indispensable On the other hand it avoids the dubious encyclopedism we have just condemned.

In theory at least, it seems easier to devise a selection examination if one has a clear idea of what the candidates will have to do later on

Nevertheless, training programmes worked out in terms of desired skills have one major handicap. In the first place, it might be feared that while the required skills do in fact meet the present situation, they might lose some of their importance in the case of economic, political or cultural change. Is one not creating a closed training system, which will not equip future educators to deal with unexpected situations not foreseen by the authors of these programmes ?

Flexibility, creativity, divergence, etc., can certainly be included among the desired qualities, but one then runs the risk of reintroducing imprecision, just where the aim was to accept only behaviour patterns rigorously defined in an operational way. In short, either a selection examination in terms of desired performances will be reasonably valid only for a comparatively simple teaching situation (a literacy campaign, for example), planned for the short or, at most, medium term. Or this examination will have to be so complex in order to provide a long-term answer to high educational demands, that in practice it brings us back to the problem of feasibility

How, then, can Selection be Made ?

A snap selection carried out before the beginning of initial training, or by any other brief examination during training, is a delusion, except where it is a question of checking the candidates' ability to express themselves in a particular way and to acquire knowledge, the object of the education envisaged being precisely to make people assimi-

late knowledge and express themselves in the same way, with no regard for the personal inclinations of teachers or pupils, or for their individual personalities.

If this is not the objective, then only prolonged observation in a teaching situation can provide the information required for a decision At first it will be negative, for it is easier to identify counter-indications than positive qualities. For example, individuals who themselves incapable of communicating effectively or who do not have a positive attitude towards pupils should not be allowed to become teachers.

To make it possible to discharge student-teachers from this course of training without too much heart-searching, even if they are well advanced along the curriculum, it is important that they should be able to receive credit for what they have learnt if they switch to other courses, otherwise wastage and the fear of creating social drop-outs will continue to open the doors of the teaching profession to people who should never have been allowed in. The modular approach enabling students to move from one type of course to another should make it possible to solve this problem in the near future, if present trends are confirmed.

The identification of positive characteristics will naturally lead to acceptance, but does not guarantee satisfactory performance in the profession Personalities change, enthusiasms die, and the vicissitudes of life often have their repercussions in the classroom, alas.

In the most serious cases, it should be possible to remove unsatisfactory teachers, whether temporarily or permanently, and find them jobs elsewhere.

Assessment of Teaching—The Key to the Whole Structure

So long as we are unable to recognize good-quality teaching, or more precisely the various sorts of good-quality teaching, with certainty, the problem of training, selecting and supervising teachers will continue to cause confusion, due to a lack of precise criteria.

And the more pluralistic and relativistic education becomes, taking into account the personality and aspirations of each of the parties involved, building knowledge instead of imposing it and, to this end, basing itself on individual experience, both material and symbolic, the more numerous will be the acceptable models of teachers and hence the factors to consider when assessing them.

But that is a different story—and at the same time the same one.

NOTES

[1]We could have recalled first of all the difficulty that already exists in predicting success in higher education on the basis of results obtained at the end of secondary education or in university entrance examinations. See Ingenkamp, *Padagogische Diagnostik*, Weinheim, Beltz, 1975.

[2]See S. Marklund and B. Gran, *New Patterns of Teacher Education and Tasks. Country Experience: Sweden*, Paris, OECD, 1974, pp. 69 et seq.

[3]E. Malmiquist, Lamplighetsproven, *Pedagogiska Skrifter* (Goteborg), No. 218, 1956.

[4]M Koskenniemi, The Development of Young Elementary School Teachers, *Acad sci. Fenn.* (Helsinki), No. 138, 1965.

[5]The argument that follows is borrowed from our study, 'L'evaluation des enseignants', in M. Debesse and G Mialaret (eds), *Traite des sciences pedagogiques*, VII, pp. 112-13, Paris, Presses Universitaries de France, 1978.

[6]Cf. D.G. Ryans, *Characteristics of Teachers*, Washington, D.C., American Council of Education, 1960. B. Rosenshine, *Teaching Behaviours and Student Achievement*, London, NFER, 1971. T.N.Postlethwaite, *L'education des maitres et l'efficacite des maitres*, Paris, IIEP, 1974. (Mimeo.)

[7]D. Solomon *et. al*, Teacher Behaviour and Student Learning, *Journal of Educational Psychology*, No. 55, 1964, pp. 23-30.

[8]W. J. Popham, 'The Performance Test' A New Approach to the Assessment of Teaching Proficiency', *Journal of Teacher Education*, No. 19, 1968, pp. 216-22. □

Research and Practice in Education

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LEARNING is the heart of the matter in education. All educational research is finally judged for its utility with respect to how much it contributes to the improvement of learning. Learning, however, has various aspects and it is influenced by numerous factors : physical, genetic, bio-chemical, neurophysiological, psychological, pedagogical, sociological, economic, historical, philosophical, etc. Hence, educational research has a vast sweep.

Most users of education as a system are, however, concerned with the quality and quantity of the output of the system. The output, although in aggregate form, is judged in terms of what has been learnt, how much has been learnt, how well it has been learnt and to what use such learning can be put by the individuals concerned so as to satisfy their individual needs and aspirations as well as those of their parents, of the society and of the state, in general. But all these aspects of learning outcome depend on various antecedent conditions, some of which are listed here :

1. *Individual*, e.g. intelligence, aptitude, motivation, processes of learning, study habits, actual time spent on task
2. *Institutional*, e.g. curriculum, teachers' competence, dedication, skill, knowledge, school, climate, home work, evaluation, teaching materials, classroom, interaction, school management.

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3 *Systemic*, e.g. organization, structure, functions, rules, regulations, supervision, reward system, wage structure, certification

4 *Administrative*, e g. delegation of power, system of decision-making, lines of communication and control, the training and efficiency of bureaucracy, links between educational administration and administration of agriculture, industry health, labour and employment.

5. *Financial*, e.g. sources of funds, system of financial control, funds over which school has control, funds over which the system has control, funds for stipends, building, recreation.

6 *Materials*, e.g. physical plant, equipment, books, teaching aids

7 *Family*, e.g parents' interest in education, time spent in study at home, size of family, residence, status, poverty.

Some of these are presage variables and some are process variables. Some of them are manipulable and some are not. Under such conditions, it is obvious that any improvement in learning outcome cannot be easily brought about. Any innovation or change introduced as a result of research in any one of the factors, conditions or processes mentioned above can have only a limited impact on the final learning outcome at the macro-level There is, thus, a genuine problem of educational research becoming immediately effective

However, there is another problem in bridging the gap between research and practice because research in education tends to be discipline-based rather than field-based In other words, the problems of research are not usually those which are found in the field, they are problems arising out of a tradition of scientific research in the various disciplines which have some bearing on education. The problems are not always those which are of great concern to the teachers, administrators, employers and parents. There is only some kind of awareness of such problems among researchers through informal discussions with users. Sometimes, newspapers and popular magazines reflect the needs and problems of users But there is little in-built mechanism by which a feedback, both ways between researcher and user, is established. Agricultural research or medical research could be a better model for educational research. But the model in practice is that of the social sciences which are more concerned with theory building, with micro-level empirical research and macro-level input-output analysis One finds a good deal of empirical research, which fills that numerous journals concerned with the problems of educational research, and which are concerned with tools, techniques, and procedures of classroom practices These contributions have a fate similar to those of fads and fashions in sartorial, culinary or interior decorating arts.

The gap between theory and practice in education is very wide. While one does find that there is generally a lag between a research finding in any field of knowledge and its practice, in education it appears that the time lag is too

long and, for many findings, it is not even a lag, because the findings do not enter the classroom practice at all. There is something in education which makes the change-over from theory into practice very difficult indeed, Teaching, healing and administering justice are the oldest professions on earth. But education is common to all these professions A professional person in any one of these age-old professions has to have education Whereas education in the profession of healing or medicine, has a direct bearing on the actual and day-to-day conduct of the physician in treating patients, whether in public or in private, this does not appear to be true for teaching A teacher has to be educated in order to educate others, but teacher education has little bearing on the day-to-day conduct of teacher in the art of teaching, at least the research evidence on this point is very weak indeed

While one notices these gaps, it also appears that even when good research has been done and a theory or model is available, educational practitioners are resistant to innovations required by such knowledge Resistance to change is a common social phenomenon and the field of educational practice is no exception. Bureaucracy everywhere is a conserver, rather than a creator, and so, in educational administration, one can hardly expect a quick acceptance and introduction of a new way of learning, evaluating, teaching, book-writing and what not There is the complicating factor of the mind, rather than the body, being involved in teaching. Even in medicine, it takes time for a new treatment or medicine or surgery to get accepted, and one does a lot of experimenting in secrecy. But, people finally accept it, and so does the bureaucracy, because most of the changes or innovations do not cause irreversible damage, at least that is the assurance and hope. But it is not so in education, where the damage, if at all, done to a young immature mind, may be irreversible. What is worse, the line between education and indoctrination is thin, and so the people and, therefore, the bureaucracy is very wary of any innovation or change in curriculum, teaching method, evaluation, books, etc. The caution is justified because educational research has yet to attain the status of medical or agricultural research, where the people do not understand the sciences involved, but they do see the effects first hand and can correct it, if they want. This is not so in education. First, the science, whatever little there is in education, is partially understood (it is not yet esoteric enough !) and what is worse, they do not see the effects immediately. The gestation period in education is too long. One has to wait for ten years or so to see whether the young ones have really developed into something better. So there is a feeling of helplessness, an inability to intervene and make good the loss, if any. The result is conservatism. Schools, in the generic sense of institutions of formal education, are truly the instruments of conserving a society as it is. Any change which arouses the slightest suspicion that this conserving function of the school may not be carried out properly by an innovation born out of research is suspect and, therefore, resisted.

There is another kind of problem. Educational research findings are rarely

unequivocal Usually confirmatory results are not obtained by independent researchers. Of course, it is difficult to experimentally control the numerous variables in educational research, and so there is always a room for a replication of a study producing a different result. The powerful tools of multi-variate analysis are beginning to be used in some of the researches, at the micro-level, on processes, and one can hope that over a decade or two, perhaps, we will have a dependable body of knowledge. The relatively new arrival of scientific educational research on the scene is, therefore, one of the reasons why practitioners have yet to develop confidence in accepting an innovation or change suggested by research

Much of the direction of educational research in recent times is towards changing teaching-learning processes in the classroom so that the learning of children can be optimized. But such research lies unutilized because decision-making and control of the educational apparatus is directed towards conformity. Research can have very little use in such situation, because research, as in all sciences, begin with questioning of what exists, and also ends with asking further questions. It has taken centuries for physics to change the view of universe. It will certainly take longer for the educational sciences to change the view of man

The users of education have to be brought into the picture in determining what research in education needs to be done. The teachers, administrators and parents should meet with the researchers more frequently to discuss the problems with which they are concerned. A two-way communication channel has to be opened up between the researchers and the users, and it will be educative for both Research in education will then be neither discipline-based, nor empirical technique-oriented research, it will be field-based like in agriculture It will require an organizational arrangement in which, from the village level upwards to the national level, there will be institutes of research in which the researchers, the teachers, the public, the employers, the bureaucrats and other concerned should gather periodically to discuss what goes in in the institutions around them from the kindergarten to the university. Arising out of such discussions, research problems should be formulated and specialized institutes for the pre-school, the primary school, secondary, higher secondary, technical, vocational college, etc. should be established to tackle these problems and provide immediate feedback. Once the research reports are available, these should be discussed in a non-technical language in the institutes of education, inviting all the parties concerned But if the innovations suggested by research are found useful, thereafter the teachers should be free to use these in the schools, under expert supervision. Of course, all these will require the building of necessary infrastructure at all levels, provision of training of teachers, researchers, specialists, availability of equipments, books and journals at lower level near the villages. Above all, there has to be a natural will to improve education by altering those variables in teaching and learning which,

research evidence to date indicates, have the highest pay-off in terms of improving the quality and quantity of learning in classrooms.

Dissemination of results of research in education suffers because the results are published in professional journals read by researchers Teachers, administrators and public men do not read such journals, by and large In meetings of professional associations of scientists and educators, learned papers are read; symposia are organized and seminars are held in universities and institutions of higher learning. The audience in such gathering is, by and large, composed of scientists and educators themselves. The groups that are left out are planners, public policy-makers, administrators, supervisors, principals and, of course, the parents. Thus, dissemination, whether it is through publication in scientific and professional journals, or through conferences, seminars and symposia, does not really carry the message of innovation arising out of research findings beyond the four walls of the prestigious institutes and universities, concerned with research. This is true of much scientific research in other fields. But newspapers and media of mass communication fill in the gap between the researcher and the user by publicising research results and discussing their implications. In education this is yet to develop in many countries of the world

The need for bridging the gap in communication is obvious Let the scientific culture of educational research go on. But, in addition, it is necessary to develop a trained cadre of media men who will disseminate research results to the public at large It is also necessary to bring into the institutes, universities, etc the other groups mentioned earlier who are concerned with using the findings of research in bringing about changes, in especially designed meetings the purpose of which should be two-way communication between the researchers and the users

There are, however, numerous instances of classroom practices changing as a result of research, e g. changing teacher behaviour in instructional process through feedback, formative evaluation based on educational objectives, individualization of instruction and self-pacing through programmed instructional strategies and so on. These applications of research findings indicate one important fact, viz. the role of the teacher. Teacher is the pivot of all worthwhile educational change and any effort to by-pass the teacher is likely to be counter-productive. Dissemination should specially aim at the teachers at all levels. In some countries, their number is perhaps second only to that of the defence personnel. By sheer size and by the fact that teachers are usually associated in unions make this the most important target group for any successful educational change. Besides, teachers are opinion leaders in the third world countries, where illiteracy is high in the rural population, the economy is largely agricultural and the society is village-centred. In the developed countries of the world also, the teachers, through their associations, form powerful pressure groups, either to induce change, or to resist change.

In the third world countries, particularly in the Asian region, the kind of research which the users find useful are concerned with bringing the community closer to the school so that the parents begin to take greater interest in their children's studies. But as the children grow into adolescent and youth, their parents are more concerned about their character and are worried by the alienation which, according to them education creates in them As they grow up further, the parents are concerned about their employment Educational research which can meet such needs and expectations has to be action research involving teachers, students, supervisors, administrators, employees and of course, parents. It means a change in the mode of functioning of the formal institutions which should move in the direction of non-formal education by bringing in flexibility, individualization, etc.

The administrators and planners in the third world countries, however, have different needs and expectations They are concerned with a national curriculum as an instrument of nation-building. How to effect a compromise between a national uniform curriculum, and a rational, relevant community need-oriented curriculum is a problem. Research should be utilized to find out what is the best way of making such a compromise so that supra-ordinate national goals do not come into conflict with subordinate regional or local goals based on semi-tribal, religious and linguistic identities Another problem of the administrators is to optimize the efficiency of the system so that optimum work is done by the teachers, the learners and other concerned, within the serious constraints of resources in men, materials and money. This is a problem in planning education very often within a framework of state planning, which does not enthuse the parents, teachers and students. The administrators need research to show what will increase the initiative, drive and enterprise among teachers and educators, and they need research to show how the motivational and managerial problems can be solved

Finally, the significant problem, which research has failed to tackle, but which the users expect the researchers and decision-makers to tackle, is that of unemployment of the educated youth. The linkages between the institutions of learning at all levels and the public and private sector employing organizations are weak in most countries. Guidance and placement services, career information and planning, are not integrated with curriculum construction and pedagogy and the employment market. Researchers have not entered this difficult field in a big way. It will have to be a different kind of multi-disciplinary research, with quick dissemination of results and field trials built into the schemes. It will require dove-tailing of formal, non-formal, pre-vocational and vocational education, with a net working of educational and employing institutions. □

Science Teachers and Educational Reconstruction

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WE ARE passing through the heyday of the tremendous scientific and technological developments. The explosion of knowledge is unprecedented in the history of mankind. In its wake the old order is changing but hardly yielding place to a new social order. Therefore, educationists, scientists and teachers have to devise unusual methods and practices to meet the present challenges harping upon the educational arena. The teaching methods of the past which are being used indiscriminately even today, have hardly any relevance to the present needs and requirements and might become irrelevant in the time to come. Therefore, it calls upon the teachers and educators to play a decisive role in educational reconstruction.

It is a sad commentary on the teaching of science (particularly in an age of science) that the teachers have been teaching textbooks of science rather than *science*. The result is that the young growing generation lacks in rational thinking and scientific attitude which form the basis of modern life Moreover, the teaching of science has very little relevance to the life-needs and situations and, therefore, science continues to be a fearsome demon to the learners, adversely affecting their growth

It is a bare fact that in most of the institutions science is being taught in a vacuum with hardly very few equipments. In rural and interior areas the teaching of science has tended to be a farce, leaving a few devoted science teachers who pour out their heart in maintaining the standard of science teaching, it is widely realized that science is being taught most unscientifically in most of the schools and, therefore, an ordinary school-going child hesitates even to think of studying science.

Accept it or not, it continues to keep the children fear-stricken and deprives them from learning science. It creates a generation-gap which looms large upon the very life-style of people at length. The aim of teaching science may be summed up as to (*i*) inculcate spirit of enquiry, (*ii*) promote scientific thinking, and (*iii*) stimulate

rational living. The question arises · Does the teaching of science as it exists today help in achieving the aims of science teaching as mentioned above ? If not, why ? Blame the reasons, condemn the existing facilities and so on so forth. But does it serve the purpose ? Has it served the purpose ? No, never.. ..perhaps is the only answer. Then, why do we not devise alternative educational means and methods of teaching science ? It is an established fact that there is ever-widening scope for the science teachers to work for the educational reconstruction and serve the cause of science. How ?

Some Suggestions

1. Local environment is rich enough to establish many scientific concepts and difficult terms. *Explore it.*
2. Nature has tremendous potentialities to provide scientific equipments and which can replace many sophisticated and costly scientific appratuses. *Identify them.*
3. Innovative practices can stimulate the interest of the learners for the learning of science. *Be receptive to them.*
4. The teacher should himself be a learner and an explorer. He can only promote spirit of enquiry among the students if he himself practices it. *Make it a reality of your day-to-day teaching*
5. The thirst for learning is an inborn characteristic. *Kindle it.*
6. The child is a growing organism of flesh and blood. Draw out the best that the child has through the teaching-learning process. Help the child in creating self-confidence. *Know the child if you can, nay, you must.*
7. Make science teaching an interesting process of learning. Science which appears to be a demon of fear and a difficult pill to swallow, should become a lively and pleasant learning experience *But how* ?

—Prepare the base for science learning.

—Make scientific concepts clear at the very outset through illustrations from day-to-day life and known environment.

—Relate learner's experience to the concepts which are to be established

—Learning through activity should be the core of science teaching.

—Be an explorer and allow the children to be an explorer by giving a free play to their imagination along with guided learning.

—Students' queries may have some bearing. Never lose patience when they have something to ask or suggest. Instead, promote spirit of enquiry

—Analyse the subject keeping in view the learner and make it sequential and easy to grasp.

—Give life-like experiences by exploring environment which surrounds the child

—Allow the child to have the first-hand experience in the realm of learning.

—Create situations and let the child react. Guide only when required

—Always look for innovative practices; apply them judiciously and see their effects on the learner and the learning process.

Above all, stop blaming others for ineffective science teaching schools. Better search your heart, analyse your own worth and be devoted to the pursuits of learning that you either opted or that have fallen as a fateful activity on your part. 'A lamp can never lit the other lamp unless it continue to burn its flame', remarks Tagore. Therefore, be a learner throughout your career, nay your

life Learn, go on learning, keeping abreast with the explosion of knowledge You can kindle the spirit of learning if you yourself are devoted to learning

Scientific enquiry and research are crucial to all developmental activities and, therefore, should form the basis of educational reconstruction As a teacher you should promote experimentation and novel ideas It is only possible if you first identify the areas of experimentation based on students' needs, orient and reorient your teaching accordingly and go on exploring ways and means for effective classroom and out-of-class teaching. *Expansion without consolidation is meaningless Educational reconstruction without experimentation and research is a farce It is like beating a dead for the claims of life*

Sound pedagogical footings are not enough for the educational feats The planning and its implementation is essential for making education an instrument of change. What should be the stages and steps of planning in teaching-learning process ?

—Planning should be with the school. Identify a cluster of schools knit together, having identical environment—physical, social and cultural

—Bring the subject teachers on a common platform. Explore the environment Identify educational needs in each and every subject. Prepare the teaching aids in each subject for each topic. Fix minimum learning points. Illustrate how best they can be fixed. Clearly define the role of teachers, the role of leaders. See that learners take maximum initiative.

We should Do It ?

The academic wing of educational administration should come forward and shoulder this responsibility. They should plan at the school level and the select cluster of schools. They should also associate the teachers from planning to implementation and supervision well before the session commences. The focus of all planning should be the school. Local environment and resources should be explored to the maximum. The teacher should be given a free hand in planning, execution and evaluation The plans should be cast and recast on the basis of evaluation. It should be a continuous process of educational reconstruction. Subject-teachers of the area, say tehsil area, be called for and be asked to undertake the following :

1. To prepare a list of the teaching material available in the school, topicwise in each subject.
2. What material can be collected through local resources ?
3. How local environment can be used for effecting teaching ?
4. The role of the teacher and the role of the learner be specified.
5. Evaluation of the work be done periodically and its follow-up programme be taken up.
6. What difficulties do the teachers face in teaching the subject effectively ? How to rectify them ?—should be discussed and suitable steps taken.
7. What innovative practices can be taken up to gear up learning activities of the school ?—should be decided.
8. Realistic approach—time limit, students' standard, learning facilities, etc. be taken into consideration while planning for effective teaching.
9. Frequent meetings of the subject teachers be called and educational ways and means be specified for the guidance of the teachers.
10. Minimum achievement target be fixed in each subject and educational

ways and means be specified for the guidance of the teachers.

11. Regular orientation programme for the subject teachers in view of national standard of education be arranged at the division level. Training colleges be associated with all these programmes such as NCERT, SCERT, SISE, SIE, RCE and colleges of education including BTIS

The Role of Learners

The learner has to be kept active throughout his career as a student. He should be motivated to work as (*i*) an active learner, (*ii*) an explorer, (*iii*) a devoted and studious student, reading concerned material and preparing articles, (*iv*) presenting articles in various symposia, and (*v*) helping the teacher in his exploratory work

The Role of Science Teachers

The science teachers have to play a key role in effective teaching They have to plan their learning activities in view of (*i*) standard of students, (*ii*) time limit, (*iii*) desired standard—depth and content coverage and additional learning points which would help the students for advance studies at later stage, (*iv*) available teaching material in the school, (*v*) local environment, (*vi*) students' learning—independent and guided, (*vii*) students' participation—in the classroom and outside, (*viii*) innovative tried out practices for effective teaching, (*ix*) instructional material—supplementary reading material that he could provide to the learners, (*x*) experimentation for encouraging the spirit of enquiry, and (*xi*) periodical assessment and follow-up

It is a fact that nobody is going to stop you from becoming a good teacher and from trying out innovative practices in your day-to-day teaching. The need of the hour is to invoke the self of the teacher, take him into confidence and pave way for effective teaching-learning process. It is only possible through teacher's self-realization, self-initiative and participation. Pledge and commit yourself to the cause of education. Contribute to the teaching of science by practising innovative ways. Pitch your efforts on the realities of actual classrooms. Help the child to draw out the best that he has by promoting the spirit of enquiry and channelizing his potentialities in creative and constructive ends. The destiny of science teaching lies in the hands of teachers. Admit it with professional commitment. There is no alternative to sincerity, dedication and hard work. Therefore, work with a vision, with imagination enshrined with the good of all. It will be a true service to the field of education. □

Inservice Education of Teachers at the Centres of Continuing Education

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THE INSERVICE education of the teachers has been the concern of various central and state level agencies during the past three decades The central agencies that have been active in the field are: All India Council for Secondary Education, Directorate of Extension Programmes for Secondary Education, Department of Field Services of the NCERT, Departments of National Institute of Education and Regional Colleges of Education The state level agencies are the State Institutes of Education, State Institutes of Science Education, Directorates of Public Instruction, State Boards of Secondary Education and the Colleges/Institues of Education through their Extension Services Centres/Units. Inservice courses, particularly the Summer Institutes, were organized by various university departments in collaboration with the UGC, USAID, UNICEF and other agencies Though these agencies of inservice education succeeded in creating awareness for the professional improvement of the teachers and in generating new ideas yet their overall impact was not thought to be very significant. This may be due to the reason that the courses organized by these agencies were mostly at the state, regional and national levels. As such their benefits did not reach a vast majority of the teachers Moreover, the courses organized proved very costly in terms of the money spent and the teaching work was also dislocated in the schools Sometimes the courses were organized when the schools did not have vacations and the teachers were away from their classes for quite sometime attending these courses.

In order to overcome the above limitations the scheme of Centres of Continuing Education (CCE) has been introduced by the NCERT in collaboration with the state education departments About 100 such centres have been established in various parts of the country. These centres look like Teachers' Centre of the UK where all teaching

resources like textbooks, maps, journals, films, slides, video-tapes, TV and instructional material of other types are pooled at a place for use by the teachers of a particular educational authority area. The CCEs are supposed to cater to the inservice needs of secondary school teachers and elementary teacher-educators of one district covering about 12,000 teachers. One can hope that this decentralization will prove useful not only in meeting the felt needs of the teachers but also in bringing the various inservice programmes at the door-step of schools. One advantage of the CCE scheme is that all the resources are pooled at a place for utilization by the teachers. In this way duplication of efforts is also avoided. At present the college teachers of arts, science and education faculties are teaching these courses at the CCEs. The centres should not hesitate in involving outstanding experienced elementary and secondary school teachers and members of the inspecting staff as resource persons The courses given to the teachers at the centres also need some kind of standardization. These have to be made more compact and limited in their scope of functioning so that the courses can be given as 'one weekend', 'two weekends', 'three weekends', or as 'vacation' courses. The instructional material to be used at these centres is to be developed locally or collected from other resources, viz. the schools, colleges and other agencies of inservice education. Books and teachers' guides concerning a particular subject may be prepared for use at these centres and displayed for the benefit of participants when a particular course is in progress.

It is also felt that the CCEs should be different from the existing extension services centres/units. There can be several departures in the courses to be organized both in course content and their mode of operation. There are several factors which might affect the organization of inservice courses at these centres or for that matter anywhere, where inservice education of a group of people is being organized in a systematic way. These factors include several issues and problems of inservice training which are discussed below.

Aims and Objectives

The aims and objectives of providing inservice education to the teachers may be kept in mind. These range from 'general' to 'specific' objectives. The objective may be upgrading the knowledge of content area of a subject or developing professional competence (through orientation in methods, curriculum, evaluation, etc) For example, the State of Maharashtra has taken a policy decision to organize courses in subject content areas only at its various centres. The State of Gujarat lays more emphasis on the methodology, evaluation and other aspects of teachers' professional growth. Each state, for that matter each centre, can have its own policy with regard to the choice of subject areas for inservice training. The courses may be need-based. The needs may be identified by conducting surveys of teachers' professional needs through questionnaires, opinionnaires or personal contacts of headmasters or inspecting and supervising staff.

Distance-Learning Techniques

The teachers' role and functions have been changing constantly over the years due to advances made in science and technology. Some distance-learning techniques—radio lessons, instructional television and correspondence courses—have appeared on the educational horizon of the various developed and also, to a limited extent, in developing countries. Some of these techniques, particularly the correspondence enrichment materials, can be produced locally for use at a centre. The NCERT through its Regional

Colleges of Education, have developed lessons in many school subjects. These lessons, which are in English, can be used as reference material for developing many more lessons in regional languages

Modes of Training

There are different modes of training which can be adopted by the CCEs.

Number . Single course of combination of courses such as sequential type of courses. The courses can be of short or long-term

Location : Location of a course can be at school level, at taluka level or district level. The courses may be of residential or non-residential type Most of the courses at the CCE will be of non-residential nature.

Intensity The courses will be either 'full-time' or 'part-time' or 'sandwich type'.

Duration : The duration of the course can be for some days, weeks or months.

Time The course can be organized during school hours, after schools hours, on weekends or during vacations.

Number of meetings : How many meetings are required ? In the mornings ? In the evening ? Or in the night ?

Medium of training : 'Face-to-face' training mode includes personal attendance by the participants This is the most convenient way of organizing a course. 'At-a-distance' mode includes radio lessons, television instruction, correspondence courses, assignments, term papers, exchange of staff and sponsoring visits of subject specialists to the schools

Course Content

Syllabus for the course may be drawn up and daily routine may also be prepared in advance. The courses may be sequential type which may be repeated for different groups of teachers. The centres may not organize courses in those areas which can be handled conveniently by the extension services centres/units or even by the individual schools.

The existing practice followed at the CCEs is that each centre prepares its own syllabus of inservice programmes for each subject indicating the number of courses that are to be organized by it during the year. The number of hours to be devoted for covering this syllabus is also indicated For example, one centre of continuing education in Maharashtra has planned for 12 programmes for secondary school teachers each of 19 hours' duration in four science subjects, namely physics, chemistry, biology and mathematics Similarly, the centre has planned two programmes each in physics, chemistry, biology and mathematics for the primary teacher-educators. Each programme is properly graded Those who complete the first programme move on to the next higher programme This centre will be able to cover 1,680 participants in one academic year by putting in 7.20 hours of work at the rate of 60 hours per month. In biology theory, for example, the topics covered will be classification, living and non-living structure, cell structure, cell division and cell evolution. Practical work will include study of mitosis and chromosomes and testing for human blood groups In physics theory the participants will study the types of forces in nature and reduction of errors in practicals In chemistry theory they will study atoms and molecules and chemical reactions and among the practicals will be included purification of salts In mathematics they will concentrate on numbered operations, sets, prime and composite numbers. The syllabus in geography and other social science subjects is also specified so

that the resource persons are able to cover these topics in the available time.

Methods of Study

Instructional methods include lectures and demonstrations by the staff of the centre and practical work by the participants. Discussions may be held in small groups. Conferences, seminars and study circles are other methods that can be adopted. The participants may work on projects and perform experiments. They may be given reading and writing assignments. Reading assignments include consultations of reference books, handbooks and programmed lessons Writing assignments include preparation of reports and teaching materials.

Orientation of Resource Persons

A number of resource persons are to be involved at the centres of continuing education. They may be oriented towards the philosophy of inservice training and techniques of teaching to be followed at the CCE. The resource persons who work at a particular centre may share among themselves the experiences acquired over a period of time. The resource persons may evolve jointly the most effective way of handling the various inservice groups of teachers

Evaluation

At the end of the course the organizers must get some kind of feedback so that the course may be improved further The performance of the CCE, as a whole, may also be assessed after the programmes have been in operation for some time. This may be done either annually or after three to five years.

The Follow-up

This includes assessment of work being done by the participants after they have undergone inservice training. The CCE may bring out a newsletter and integrate the new learning with the past learning. The participants may send short reports of their experiences for publication in the newsletter They can thus share their experiences with others The resource persons may also pay visits to schools to observe teaching courses that have been covered at the CCEs

Continuity

Professional training has to be a continuous process The participants may be invited again for a similar course after some time. As most of the teachers are teaching two school subjects, they can be given courses in the other subject when they come to a centre for the second time.

Other Organizational Matters

The first is the issue of deputation of teachers for various courses The teachers may be deputed to the various courses by the District Education Officers or Block Development Officers Before this is done they may assess the inservice needs of the teachers One criterion of determining the needs of various subjects is the results of students in the public examination. The criterion of results is not the only way to assess the inservice needs. Subject-teacher associations of teachers may also be consulted in this regard. A survey of inservice needs can also be done by the principals and honorary directors of the centres. The second issue concerns the building up of resources for continuous use at the centres. The CCE may build up required services to be extended to the participants. This includes materials, documentation, teaching aids, library facilities, information and advice regarding apparatus, use of audio-visual equipments, exhibition of books, journals and specimens of students' written work. The third and

final consideration are the participants themselves. The organizers may also pay proper attention to their welfare such as making travel arrangements, providing light refreshments to them, developing cordial staff-recipient relationships and recreation. If the course is of long duration arrangements for their stay and library study by extending library hours may also be thought of

This article has discussed various issues pertaining to the inservice education of teachers in the context of the newly introduced agency of inservice education, the centres of continuing education. Issues raised in this article and suggestions offered for tackling various problems would in fact apply to the organization of inservice courses organized by other agencies as well. □

Child Literacy in Bihar, 1961-71

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"THE CHILD IS the father of the man" has rightly been said by William Wordsworth, one of the greatest poets of nature The childhood is the most formative period in which the foundation stone of good habits, high moral character and intelligence is laid down Furthermore, the children of today are, of course, considered to be the future social reformers, leaders of the nation and founders of noble societies. For this, they need good training, good education, better care, better food, etc. during their highly formative period like pre-school age. Any slackness on the part of their parents as well as government authorities may cause a great deal of damage to the society as well as the nation.

In the light of the above observations, the importance of education among children is really felt. Education and training are must for children in society In this connection it has rightly been remarked as "A most essential function of education consists today as it always did in socializing the child, that is to say in preparing it for life in the world in which it must live."[1] It may further be added that the aim of education is to fit a child or a young individual for the society in which it will grow up and ultimately work and live in".[2]

The development of education, in a socio-demographic perspective, is measured by the level of literacy attained by a given society. Its importance lies in the fact that regarded as an instrument of social change bringing social consciousness in the society, making changes in traditional ways of life,

[1]H.V. Musham (Ed.) *Education and population: Mutual impacts*, International Union for the Scientific Study of Population, 1975 p. 41.

[2]M G.C. Menon. *Science and Society*, Patel Memorial Lectures, Pub Div., Min. of Information and Broadcasting, Aug. 1973, p. 18.

norms and values prevailing in the society [3] Its significance in the promotion of family welfare programmes may be attached to the fact that it helps in creating favourable attitude amongst people towards small family norms and motivating them for adopting family planning methods in the right earnest. In brief, "literacy is perhaps the most important single way station to social and economic development, opening the individual the door to innovative ideas, options and actions and releasing him from only the known and traditional."[4]

Objectives

In the light of the above observations, the importance of education among children is really felt. This necessitates desirability to study the important aspects of literacy amongst children As such, this article aims at studying child literacy in Bihar during the period 1961-71. In this connection, population of the state under 15 years of age will be considered as the children of the state and the level of literacy amongst them according to age, sex and rural-urban differential will be taken into account.

Sources of Data

The analysis of data is based on the data available from census of India for the period 1961-71. This period has been chosen for the study because of the fact that definition of towns or urban areas has remained the same in both the cases, so that there is no problem of adjusting age-sex data on literacy for rural-urban classification.

[3]R.B. Ram and S.D N. Singh. Educational inequalities in Bihar, 1961-71. Paper presented in UGC-sponsored seminar on 'Rural studies in India' held in the Deptt. of Sociology, Patna College, Patna Univ., 2-11 March 1979, p. 2.

[4]Literacy and world population. *Population Bulletin*, Vol. 30, No, 2, p. 5.

Analysis

Before any attempt is made to study child literacy in Bihar, it is important to know as to how many children are living in rural as well as in urban areas of the state and the country Such information will, no doubt, be useful for child welfare planning. According to 1971 census there are 2.50 and 23 03 crores children in Bihar and India, respectively. They constitute 42.58 and 42.02 per cent of the state and country's population Of all the children of the state 9.5 per cent live in urban areas whereas in the country this percentage is 18 49. It may further be noted that of all the children in the country 10.42 per cent live in Bihar, the second most populous state in the country. It may be added that all the rural and urban children of this country 11.56 and 5.35 per cent live in rural and urban areas of Bihar, respectively.

From the foregoing analysis it appears that a majority of the children in the state (92 06 per cent) and the country (81.51 per cent) live in rural areas The social and economic background of the people living in rural areas of the whole country are generally very poor as compared to urban areas. As such, village children should be given to top-priority in relation to child welfare programmes. Tables 1 and 2 reveal the level of child literacy in Bihar with respect to age, sex, rural and urban categories for the years 1961 and 1971.

Over-all Literacy of Children

Out of 1 96 crore children belonging to the age-group 0-14, 14.98 per cent were found to be literate in 1961 in Bihar. The corresponding percentage for the country was of the order of 19.68 per cent. The level rose up to 15.12 per cent in 1971 in the state and 23.05 per cent in the country. When the children in the age-group 0-4 who are

TABLE 1

AGE-SPECIFIC LITERACY RATE FOR CHILDREN ACCORDING TO RURAL, URBAN AND ALL AREAS OF BIHAR

Age-group	1961 *Rural*	*Urban*	*Total*	1971 *Rural*	*Urban*	*Total*
5—9	14.76	39.49	16 68	11.70	38.38	14.18
10—14	30.66	64.79	33.62	30.87	65.60	34.43
5—14	21.19	50.41	23 56	20 01	50.91	23.01
All children 0 14	13.45	32.73	14 98	13.12	34.15	15.12

generally illiterate are excluded from the analysis, the effective literacy rates come out to be 23.56 and 23 01 per cent in 1961 and 1971, respectively, in Bihar.

Literacy according to Sex

The literacy rate among male children aged 0-14 were found to be much higher than the level among female children Corresponding levels of literacy according to Table 2 were found to be of the order of 21.18 and 8.51 per cent in 1971 as against 22 35 and 7.17 per cent in 1961 in that order. This high gap between the literacy level of two sexes (male child being at higher level) may be the outgrowth of and ancient prejudices against the education of girls as such, and against the employment of women in pursuits where they would need education. Also the masculine tradition in the school is great Even elementry schools are separate for boys and girls. Some 190 years ago there was not a single girls' school in the country. But the figures of recent surveys reveal that India is overcoming her prejudice. In spite of the gains being made by women, the great inequality in literacy with other developed societies that still prevails, gives an insight into the current role of literacy in Indian society. For the mass of people in our society, the ability to read and write still apparently has little purpose.

Age-specific Child Literacy

Age is an important demographic characteristic according to which the level of literacy generally varies The level of literacy rises according to age of the children. From Table 1 it is evident that in both the censuses the level of child literacy in the age-group 10-14 has been comparatively higher than the level in the age-group 5-9. The age-specific levels of child literacy in the age-groups 5-9 and 10-14 in Bihar were observed to be of the orders of 16.68 and 33 62 per cent in 1961. The former level declined to 14.18 whereas the latter slightly increased to 34.43 in 1971. The decline in the level may be attributed to mainly change in age-structure.

Rural-urban Differentials

Rural-urban differential in literacy in general and child literacy in particular is a recognized fact. Rural literacy has always

been observed lower than urban literacy in almost all parts of the world It will be interesting to examine the educational situation in respect of Bihar. It may be noted from Table I that child literacy in rural areas was found to be of the order of 13.45 per cent as against 32.73 per cent for urban areas in 1961 The level of literacy in rural areas slightly declined during the period 1961-1971 from 13.45 to 13 12 per cent whereas urban areas experienced a rise in the level of literacy from 32.73 in 1961 to 34.15 per cent in 1971. Further, it is evident from Table 1 that child literacy in urban areas had been more than twice as prevalent in rural areas in Bihar during 1961-1971 Such low level of literacy in rural areas may be attributed to fewer schools, fewer reading materials, fewer incentives, and less motivation of education as well as lower income levels as compared to urban areas.

Rural-urban Differential by Sex and Age

The levels of child literacy for male in rural areas were found to be of the order of 20 90 and 19 33 as against 38.72 and 38.56 per cent in urban areas in 1961 and 1971, respectively This indicates clearly the higher urban male literacy as compared to rural literacy of the same sex. On the other hand, the levels of female child literacy in rural areas were found to be of the order of 5.58, 6 38 as against 26.10 and 29.24 per cent in urban areas in 1961 and 1971, respectively This clearly supports in favour of much higher urban female child literacy compared to rural female child literacy.

While examining the level of literacy in rural and urban areas in different age-groups and sex as shown in Table 2 the following important points may be noted .

1. Age-specific child literacy for each sex was observed to be higher in the age-group 10 14 as compared to 5.9 both in the rural and urban areas.
2. Within each age-group male literacy was observed to be higher than female literacy.
3. The level of child literacy in urban areas was found to be much higher than rural areas in each age-group and for each sex.

TABLE 2

AGE-SEX-SPECIFIC LITERACY RATE FOR CHILDREN ACCORDING TO RURAL, URBAN AND ALL AREAS OF BIHAR

Age-group	1961						1971					
	Rural		*Urban*		*Total*		*Rural*		*Urban*		*Total*	
	M	F	M	F	M	F	M	F	M	F	M	F
5—9	22.12	6 94	45.34	33.07	23.95	8.94	16.72	6 29	42.35	34.04	19.11	8.85
10—14	46.67	12.15	74.22	52.92	49.13	15.52	44.25	14.91	72.19	57.48	47 16	19.18
5—14	32.28	8.98	58.27	41.28	34.44	11.53	28.98	9.92	56.52	44.41	31 68	13.22
All children 0—14	20.90	5.58	38.72	26.10	22.35	7.17	19.33	6.38	38.56	29.24	21.18	8.51

The reason for all such differentials have already been mentioned in the context of general rural-urban differential in literacy.

Summing Up

The foregoing analysis may be summarized with the following remarks and suggestions.

1. According to 1971 census there are 2.40 and 23 03 crore children in Bihar and India, respectively. Majority of the children in the state (92.06 per cent) and the country (81 51 per cent) live in rural areas. As such village children should be given top priority in relation to child welfare programmes.
2. The level of child literacy in Bihar rose from 14 98 in 1961 to 15 12 per cent in 1971 as against from 18.69 to 23 05 per cent in the country in that order, indicating very slow progress in the state as compared to the country during the period 1961-71
3. The literacy rates amongst male children were found to be much higher than amongst female children as evident from the level of the orders of 21 18 and 8.51 per cent for male and female children in 1971. Such high gap in the level between two sexes may be attributed to the outgrowth of and ancient prejudices against the education of girls as such and against the employment of women in pursuits where they would need education. The lack of the facilities of girls' schools may also be one of the important reasons.
4. The level of literacy in rural areas slightly declined from 13.45 to 13.12 per cent during 1961-71 whereas urban areas experienced a rise in the level of literacy from 32.73 in 1961 to 34.51 per cent in 1971. The child literacy in urban areas was observed to be more than twice as prevalent in rural areas in Bihar during 1961-71 Such low level of literacy in rural areas may be attributed to fewer schools, fewer reading materials, fewer incentives, less motivation of education as well as lower level of family income as compared to urban areas.
5. Male literacy was found to be much higher than female literacy, both in urban and rural areas, in each age-group.
6. It is not a good sign that while national literacy level of children rose from 18.69 to 23.05 per cent during 1961-71, i.e in the last ten years, the corresponding literacy of this state only increased from 14.9% to 15.12 per cent during the same period.

In the light of the above analysis it may be suggested to the government to accelerate her action programmes on child literacy and due attention must be given to rural areas. The existing gap between sexes must be bridged. More primary and middle schools, both in rural and urban areas, should be established so that every child has easy access to them. Existing child welfare services should be expanded so that all needy children have free educational materials, lunches, clothes, medical care, etc. It is a moral duty of all the guardians in general and the government in particular to pay full attention towards the child welfare, otherwise we would not be able to contradict the statement "Bihar is one of the most backward states in India". □

Environmental Approach to Education

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ENVIRONMENTAL education is receiving today keen attention, particularly in the developed countries of the west which are confronted with environmental problems of depletion of resources, pollution and other kinds of ecological disorder. Scientific and technological progress have set mankind on a collusion course with his environment. If a proper environmental consciousness is not developed the collusion between the growth ethics and natural limits is bound to occur before long and human values and institutions will bend or be crushed by biological and physical relaties. Hence the imperative need to develop a proper environmental awareness in the people to forestall the impending disaster through a well thought out and planned curriculum at all stages of formal education.

The underlying principle of an environmental curriculum is education of the environment through the environment and for the environment. The uniqueness of this approach lies in the fact that the environment is used both as a means and an end. Environment is used as a means for all the teaching-learning activities and the consequent educational development of the child. It serves as a medium through which the child learns how to learn through investigation and discovery. Such learning experiences help create a proper understanding of the environmental problems and develop healthy environmental attitudes so necessary to preserve, enrich and safeguard the environment. There is on the one hand the conservative aspect and on the other the creative. The acquisition of the knowledge of the environment is the former. The study skill involved in the operation and the consequent development of environmental understanding and consciousness is the latter.

Environmental education is the process of reorganizing values and clarifying concepts for developing the skills and attitudes necessary to understand and appreciate the inter-relatedness among man, his culture and his bio-physical surroundings. It also entails practice in decision-making and self-formulation of a code of behaviour concerning

environmental issues It is the theme of man's role in the environment and his responsibility for it. This is no more than a logical extension from the prevailing socio-political to the socio-biotic and socio-physical education as a proper field for school and university studies Such an approach is in consonance with the principle of social relevance which requires that the curriculum should bring harsh realities of the world into the classroom to train the pupils to play their role in society as thinking and participating citizens.

Environmental education does not necessarily mean the inclusion or addition of a new school subject. The idea is to bring about a qualitative change in the content to make it more functional, relavant and meaningful to life. Man's environment has been increasingly endangered by greed and lack of foresight. Today educational and environmental problems have reached their flash points necessitating their fusion into a new area of study This new area is environmental education. The present educational system has split subject-matter into clearly defined and segregated areas ruled by the so-called specialists territorially defended by them The subjects are geared to the needs of examination and any teaching-learning situation that has no direct bearing on this is relegated to a peripheral role. Pupils are conditioned to regard some of the most crucial problems of their environment as something outside the framework of the accepted structure of knowledge and response. If later they become aware of the problems after the completion of their formal education, they will need to re-educate themselves just when some of the pressures of ordinary life are at their greatest. The reality gap between education and life is still too wide.

Man's environment is holistic. Each object or phenomenon exists simultaneously in three dimensions . spatial, temporal and formal Every phenomenon has either actual or potential interaction with other phenomenon This is holistic nature of man's environment He influences and is influenced by such an environment. A complete environmental study should, therefore, comprise of all aspects of our world with interrelatedness between man and man and between man and his environment. Traditional subjects do not help understand the totality of the real world. As their approach is analytic instead of being synthetic, the essential holism of reality is lost. To conserve this holism the curriculum must be inter-disciplinary Mere juxtaposition of disparate subjects, units or modules cannot reflect the essential unity of man's environment By adopting a holistic approach rooted in a broad interdisciplinary base, it recreates an overall perspective which acknowledges the fact that natural and man-made environment are interdependent. It helps reveal the enduring continuity which links the acts of today to the consequences of tomorrow.

Man can be educated to a holistic view of his world from infancy to adulthood given the appropriate learning opportunities culminating in at least a partial understanding of his role From infancy to maturity the formal, temporal and spatial horizons of one's environment expand: the baby, his home and family, the infant, his neighbourhood and play-group, the child, his district and the adult, and the sample experiences of the wider world. The study of here and now as the centre of our education is the principle of *heimatskunda* (home knowledge) and has long been the core of local history and local geography. In an environmental curriculum, these are brought together and seen in their totality.

An environmental curriculum could be developed either by introducing into each subject the environmental dimension or by

having the curriculum prepared through interdisciplinary approach. The former technique, however, calls for interdisciplinarity. In any case, environmental education should not be treated as one more addition to the existing curriculum, but rather built into the programmes existing already in the curriculum. This new approach which involves the home, community and the school should introduce the young to environmental issues. Such an environment curriculum serves as a catalyst in the renewal of contemporary education The central idea of such an approach is to attain by means of interdisciplinarity and of prior coordination of disciplines, a practical education oriented towards a solution of the problems of the enviroment or at least to make pupils better equipped for their solution.

Such a curriculum should aim at progressively acquainting the learner with his environment and its problems. At the primary stage programmes like the study of the child's immediate environment through observation and discovery for the development of critical faculty and for gaining an awareness of the problems and the need for their solutions may be taken up. At the secondary level curriculum should include programmes for taking children on to a more ecologically, socially and economically based application of ideas about environment. University curriculum should serve as a basis for all the specialized courses of knowledge of the functioning of the ecosystem and an insight into the socio-economic factors governing the relations between man and his environment together with the knowledge of the characteristics, limits and possibilities of the scientific and technological revolutions.

The child's environment which is the product of the physical and social factors which directly or indirectly influence his living conditions, has three important aspects. structure, location and change. Environmental studies aim at enabling the child to acquire necessary knowledge of these aspects through discovery and organized explorations It is essentially an approach to self-learning. In such an approach, the traditional subjects lose their distinct identity and merge or integrate with one another There is no need for a rigid syllabus Within a general framework each school must have the freedom to evolve its own syllabus depending the local environment on the principle of concentricity The amount of knowledge acquired by the child depends on his willingness and ability to respond to his environment. It is an accepted principle that the child would respond more favourably and effectively to his immediate and known environment than to the remote environmentes Therefore, any approach to learning must be based on the use of the child's immediate and familiar environment

Knowledge of the environment provides the basis for its proper understanding involving the development of key concepts and cognitive generalization regarding the environment and its problems. A proper understanding of the environment will lead to the development of proper concern for it. This is the affective domain of the personality of the learner involving the formation of right environmental attitude towards problems of conservation, energy consumption, etc. Development of both the cognitive and the affective domains in environmental education are important because research in the U. K. has revealed that while middle school pupils tended to express positive environmental attitude they lacked cognitive basis for these attitudes.

Any environmental curriculum should, therefore, involve these three elements, viz. responding to the environment (knowledge),

understanding of the environment and concern for the environment. It may be pointed out here that with younger children the scale should be local and largely based on local and direct experience with older children. The scale could be extended to include regional, national and global issues. The proportion of three elements may change with the age of the pupils.

As has been hinted earlier, the effectiveness of environmental approach to education and the realization of the objectives of such an approach is not possible if the teachers are to follow a rigid curriculum framed and imposed on the school from without. The curriculum must grow from within in the sense that each school should have the freedom to evolve its own curriculum keeping in view the following two important requirements :

1. The nature and the needs of the environment
2. Certain minimum learning needs of the learner The second is determined by the overall needs of the society and must take cognizance of the first. Such a curriculum would also be very effective for non-formal education of the drop-outs and the adults

To size up the educational requirements of children in any area and to plan provisions for meeting them one must have a clear and realistic conception of their minimum essential learning needs. These needs determine the 'minimum package' of knowledge attitudes and skills that every individual in any given society will require for an effective and satisfying adulthood. This 'minimum package' may differ from one area to another. For rural schools, despite diverse needs and varying environment the following elements may constitute the 'minimum package' :

1. Functional literacy and numeracy sufficient to read with comprehension of newspapers, magazines, useful agricultural health bulletins, etc, (*ii*) to write a letter to a friend or to a government bureau requesting information, (*iii*) to handle important common computations such as measurement of land buildings, calculation of agricultural input costs and revenues, interest charges on credit, etc.
2. Functional knowledge and skills for civic participation including some knowledge of local history and culture, awareness of government structure and functions, taxes and public expenditure available, social services, rights and obligations of individual citizens, principle aims and functioning of cooperatives and local voluntary associations
3. Scientific outlook and elementary understanding of the process of nature in the particular areas with reference to health, sanitation, nutrition, fauna, flora, etc
4. Functional knowledge and skills for earning a livelihood including not only the skills required for a particular local occupation but also a knowledge of a variety of locally useful common skills for agriculture and non-farm use.
5. Positive attitudes towards cooperation with and help to one's family and fellow men towards work and community and national development.

In an environmental approach teaching-learning strategies should be so manipulated as to be able to realize the above 'minimum

package' In devising these strategies, the environment itself becomes the means. In other words, the novelty of this approach to education lies in the fact that the environment is both the means and the end of education Such an approach is in fact a way of utilizing the environment for the progressive development of certain skills and attitudes in the children in the learning process. These may be broadly classified into three categories · (i) basic skills, (ii) study skills, and (iii) social skills. Basic skills include language development, mathematics, modelling, ability to use pictorial representations, collection and use of environmental resources The environment and objects have to be exploited in developing these basic skills. Study skills are those skills which could be developed in the children in their being involved in the first-hand activities in their environment. They include mapping, observing, collecting, classifying, experimentation and the skill of historical interpretation Social skills include health, personal hygiene, cleanliness of the surroundings, conservation and judicious use of environmental resources.

The outstanding feature of environmental approach to education is the active involvement and participation of the learner in learning activities outside the classroom. In such a situation children find it easier to talk, write, and think about the first-hand experiences The children of today who would be the adults, learners, workers and farmers of tomorrow will get an opportunity to acquaint themselves with their environment and its problems so that they learn how to use, but not abuse their environment. Moreover, by providing the opportunity for children to acquire a range of skills and attitude which are indispensable for adult life, environmental approach is a training for life itself. □

History : A Curse or A Boon ?

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FEW MONTHS back the Prime Minister had stated with regret that we could neither change nor modify our history textbooks so far These should be rewritten from a different point of view because they do not give the unbiased and impartial view about our national struggle. Besides the incidents of past mentioned in the history, there have been many developments in the country which are not mentioned in history.

It is said that history leads the whole humanity as well as politics. On the one hand, if we count the gains and achievements of history, then on the other, we come to know that history has done more harm than good to mankind. If we plunge deep in the vast ocean of history, we come to know whenever the society falls from its moral dignity, moral conduct, religion and action, a war takes place in order to set the whole distorted and disturbed administration on the right track. The historians and educationists have been asking to change the history which is the great grandfather of war. All the battles, wars and even *The Mahabharta* prove this to a large extent. It was Dhritrashtra who proclaimed that the war never goes futile and useless but these are baseless and shallow conclusions. All the wars are the tears shed on the innocent face of history. The incident of Mohammed Guari's death, not even today, but it will go on creating the differences of high and low, even in the coming generations The destruction of the Hindu temples by Muslim kings even today weakens the friendship ties between Hindus and Muslims. If history had not been written, no formation of India and Pak could be possible. Then neither Punjab would have been divided nor there could arise the baffling question of Khalistan. If we had not dared to shuffle and reshuffle the pages of history, then Lord Krishna could be present even in Masjids. If the bad actions of the English had not been history, then millions of helpless children in the revolution of 1857 would not

have been killed by Azizan. It means that every injustice is an outcome of any past injustice It is history which instead of inspiring us, will become a hindrance for the coming generation and will diverse instead of integrating them

If *the Ramayana* had not been history, then perhaps Ceylon could be a part of India Today Mai-Lai episode has become such a story in history which will go on decreasing and ceasing the good actions between North and South Vietnam History merely rakes up matters from the graves If the story of the final crisis of Europe had not made our wounds green, then there would have neither been any Hitler nor any becoming on Hiroshima If the woes of the second world war could wipe the tears, why the world could be troubled at the sight of Russian troops in Afghanistan ? Why Iran-Iraq war could continue ? It means that history is not acting as a panacea, but it is an ulcer So the only alternative is that all those pages of history should be burnt to ashes or torn off or white-washed which create hatred and feelings of jealousy in our hearts So first of all, the past must be forgotten by history History has no kind of right to compel the coming generation to suck the blood of each other. If Aurangzeb had existed on earth, then history has no right at all to create discriminations between Hindus and Muslims by telling the old past stories of his cruelty and injustice upon Hindus Such history must be condemned first of all. Such history bears insult and is meaningless which is written aimlessly *History is not merely a story of past, but more than being a story of past, it is an inspiration. If it is not it must be.*

History is a witness that the writers tried to have a classless society Marx also thought of a classless society because of the differences of high and low. That history which comes on the pages without the analysis of social conditions of that era becomes a worm in the foundations of coming era, which engulfs the whole generation It is the history of 1947 which does not let to cease the border problem of Indo-Pak. It is the story of bloodshed of 1947 which even today sheds blood among the Hindus and the Muslims at Bhiwandi, Jalgaon and Ahmedabad. History repeats itself by shuffling its pages on the eve of Idul-fitar at Moradabad. If there had been no history of 1947 war, then perhaps there would have been no question of Bengali and Bihari Muslims If it had not recited the stories hidden in its heart as a secret or as an entertainment, the President of Pakistan would not have been Zia now but some Gandhi It is also the history of the Second World War which has divided Germany into fragments. Had history not been the fiction, then neither Bhutto have been hanged nor Zia-Ur-Rehman could be shot dead If all these fragments and incidents are white-washed, then in the coming generation, there would be no Hindu, Muslim, Sikh and Christian. If history is studied basically, then it tells us that every great problem has a solution, i.e war The war of *Ramayana*, the war of *Mahabharta*, the war of Vietnam, the war of India's Freedom, the war of Bangladesh liberation—all prove that 'be prepared for war, if you want peace'.

If it is the conclusion of history, that in Vietnam peace could be restored only after 11 years, Bangladesh can get freedom after the bloodshed of two million people The Second World War comes to an end only when Hiroshima is being bombed, the formation of Pak is necessary for the formation of India If so, then these conclusions are mere shallow and baseless

We will have to accept that history keeps us spiritually and mentally fragmented It is no less than a cancer in the blood of humanity. History will have to prove that

for the welfare of humanity, Akbar was more appropriate than Aurangzeb, not eleven years' war but peace-summit of Paris, not murder of Gandhi but his life, no blood-shed in Bangladesh, but diplomacy, no third war for the solution of Indo-Pak problems but Karachi-summit like Simla's. Until history proves all this, it will go on harming mankind. The best is that it should not be a vagabond, but Pilgrim—until history proves and follows this, it will go on destroying and defaming mankind. □

Educational News

Eleventh five-year plan of education (1981-85) in USSR

It is a known fact that the high level of the erudition of the people is proof of the social maturity of a society. The Soviet Union started out by eradicating illiteracy Today, universal secondary education is juridically codified in the USSR Constitution. This is a great social gain. It gives us pride to say that young people in the country start out in life with a complete secondary education behind them, and they have vast and equal opportunities for continued growth. During the Tenth Five-Year Plan period (1976-1980) over 20 million boys and girls received their high school diplomas (after a total of 10 years of schooling). Some 24 million people, after having finished an eight-year school, continued their studies to acquire a trade at vocational and specialized schools. Industrial enterprises are receiving intelligent, well-trained specialists and industrial workers capable of assimilating the achievements being scored in complicated branches of modern science, such as micro-electronics, nuclear power engineering, etc. This is precisely the bedrock of the continued development of scientific and technological progress.

What are the main problems we have to tackle in the years to come? The Eleventh Five-Year Plan (1981-1985) for public education encompasses all the facets of education in the country.

Kindergarten

We will start with the young children. At the beginning of this year there were 14.5 million children in pre-school institutions in the country. In other words, more than half of the first graders came to school fresh out of kindergarten. We feel this is not enough, however During the current five-year plan period it has been decided to build pre-school institutions for no less than 2 5 million children. By the end of the year (1981) the number of children attending kindergarten will increase by 600,000. Soviet society is interested in each mother being able to work in peace, knowing that her child is well fed and well cared for, with qualified instructors looking after it. During the Eleventh Five-Year Plan period the public education system faces the tasks of providing the pre-requisites for gradual transition to teaching children from the age of six in preparatory classes of general edu-

cation schools. Experiments of this kind in schools near Moscow and in Georgia and the Ukraine have yielded positive results

After class groups

It should be pointed out that the role of the school in the education of the younger generation has changed in recent years, heightening considerably Its potential in the harmonious formation of the child's personality has expanded. Every third pupil from the first to the eight form spends the entire day—from morning to evening—at the school, i.e. he is in the after-class group On the one hand, this makes it possible to have a greater influence on his study habits and aesthetic upbringing, and, on the other, it frees the mother from worries about lunch, checking homework, etc. In 1985 the number of pupils in after-class groups will reach 13 5-14 million In the construction of kindergarten, schools and boarding schools, particular consideration will be given to areas with a high employment rate for women. By 1985 all pupils will be provided textbooks free of charge.

The economy needs workers with a wide range of knowledge who are capable of quickly assimilating the latest technology and know-how. Vocational schools are the source of such personnel for the most widespread trades. There are over 7,000 of these institutions in the country today. They will train 13 million skilled workers over the next five years We place particular emphasis on job counselling among school children.

Article by M. Prokofyev,
Minister of Public Education, USSR
Courtesy USSR Embassy Information Department

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Women and work in India Educational imperatives

THE CONCEPT of work may be one of the first abstract notions to be developed by man as it is basic to survival. Work may be defined as an activity in which one exerts physical strength or mental faculties to achieve a particular goal. It may also be an effort, task or duty that affords one his accustomed means of livelihood. This can be a part or phase of some wider activity. Through time the meaning and value attatched to the concept has changed according to the level of technological development and skill formation in the logic of historical and social settings expressed by a particular group of people. It came to be synonymously used with labour, travail, toil, drudgery and grind by persons from the oppressed class expressing the nature of work they undertook. Today there are a number of other words used synonymously with work, for example, employment, occupation, calling, pursuit, etc which imply organization in work and relationships in work The further adaptation of the word into language lead to formulation of words like workability (ability of a certain task to be performed), work bag or work box (bag or box with tools for work), work basket (a basket for needle work), work book (a record book of work done), work camp (a camp for workers), work day (the period or time when work is proposed to be done as compared to rest day), worker (a member of the working class), work force (total workers engaged in specific defined activity), workshop (where a specific objective is to be achieved).

In simple barter societies work of all kinds was recognized equally as it could be exchanged for commodities and vice versa. Whatever the nature of work it had an

economic value. With industrialization and a revolution in the mode of production the concept of commodity work and work for wages developed As activities of woman continued to be concentrated around the home while man moved away exchanging his labour for wages, the process of obscurantization of female labour began to take roots As activity in the home was woven in a matrix of emotional and social relations it could not and has not even today been able to get recognition as work for wages.

Parallel to work done by women in the home they have always been active participants in the production process in the agrarian economy Their entry into the market as wage-earners in the industrial society has been slow. They have generally been absorbed into labour intensive, low skilled, low paid jobs.

The basis of exploitation of the worker, defined here as wage-earner, by the owner of means of production in the industrialized society may be the authority one wields. Popularly the term worker is used to denote one who does not wield authority in a production unit. The woman faces this exploitation more harshly because she is socially a step lower than man in society.

The answer to limiting exploitation in the work situation lies in generation of an organized effort to demand rights as workers. The task of women in this direction has to be stronger as their needs are different from those of their co-male workers due to their biological role and low socio-economic status in society. Here the relevance of special legal format cannot be overestimated.

In the Indian context the problems related to women and work are accentuated by the highly sex-segnegated society and low socio-economic status. A careful examination of census figures reveals that while the rate of male work participation is more or less uniform, that of female work participation fluctuates highly The percentage of women workers in the total working force as well as their percentage in total female population have been declining Percentage of illiterate women workers is larger and they are employed in lower prestige graded jobs The rate of participation tends to decline from rural to urban areas and from small to larger communities

One of the foremost reasons for the existing status women work was identified by the Committee on Status of Women (1975), as their alienation from modern methods of production, marketing and planning that call for higher levels of knowledge and skills. One implication of this scientific and technological era being in a constant state of modification and innovation is the need, as expressed by the Unesco conference of 1972 at Paris to devote more efforts to acquiring of skills than distributing and storing of knowledge.

At the NCERT along with the concern for universalization of education and education of specific groups, integrating education with world of work has been a major task This is evident from the emphasis laid on socially useful and productive work, vocationalization and evironmental studies programmes. In this background of creating awareness and consciousness among teacher-educators and teachers to link up world of work and education, it is high time for us to think in terms of girls' education and its linkages with traditional world of work and newly opening avenues for work.

Under undifferentiated curricula and one curriculum for boys and girls we cannot think of looking after girls' education as a separate entity Yet there are certain women specific questions which must be tackled in order to highlight the existing disparities in levels of education between boys and girls

and to mitigate them in the interest of education-work-women development.

Extracts of a paper circulated by Women Education Unit, NCERT, 1.5.1982

NEWS FROM FIELD UNITS

NCTE syllabus in M.S. non-agricultural universities

A FOUR-DAY conference was organized by the Department of Teacher Education, NCERT, New Delhi, in collaboration with and at the SIE, Pune, to review and implement the NCTE syllabus in the non-agricultural universities of MS. About 50 teacher-educators including principals, vice-principals of secondary teachers' training institutes of Maharashtra under the jurisdiction of three non-agricultural universities—Nagpur, Bombay and Marathwada—participated in the conference Prof. S.B. Adaval and Prof. P.K Roy in their addresses exhorted the participants to understand the need and concern for the introduction of the syllabus of the NCTE which was prepared after careful planning and sustained academic exercise. They wanted the participants to maintain the spirit of the 'Curriculum framework' while allowing for the flexibility to suit the needs and conditions of the universities in general and the TTIS in particular. They emphasized the implications for implementing the syllabus and the effort that should follow to achieve the objectives set forth in the framework.

Enrichment courses in psychological foundations of education

THE SNDT College of Education for Women, Pune, organized the above courses for teacher-educators teaching at the B Ed and M. Ed. level from 22 March to 11 April 1982. In all 25 teacher-educators drawn from the six non-agricultural universities of M.S participated in the courses. These courses were sponsored by the UGC The principal objective of organizing the courses was to review the present syllabus in 'psychological foundations' in the light of the ever-growing demand to modify and enrich it so as to make it more relevant to the social ethos in general and the changing role of the teacher and education in the emerging Indian society in particular. During the course of the 21-day summer institute the 25 teacher-educators had immense opportunities to have a comparative study of the syllabi of the various universities at B. Ed and M. Ed. levels. They felt that there was enough scope to remove the 'deadwood' and incorporate new titles that had intimate bearing on the new demands made by the society on the teachers. The participants were of the view that to make the syllabus truly 'professional' in its character, there should be greater emphasis on the practical exercises so as to achieve greater insight into the psychological problems as they affect the new generation of students

One of the groups of participants made a quick survey of the textbooks and resource material available in the subject both in English and Marathi. It was generally felt that while a good deal of literature existed in English and written by foreign authors, very little is published by compe-

tent authorities in Marathi. They strongly believed that this dearth of books in Marathi should be partly made good by translating some of the standard books of the foreign authors and making them available to the Marathi-medium teacher-trainees as well as teacher-educators who are in quite a sizeable number.

Conference of inspectors of schools of Orissa

A CONFERENCE of 80 Inspectors of Schools of the State Education Department was held on 3 June 1982, under the chairmanship of the Education Minister The Education Minister in his address emphasized that in the present circumstances more stress has to be given to universalization of primary education in the state and the inspectors have a special role to play regarding the appoinment of teachers, supervision of teaching, construction of school buildings, supply of instructional materials, etc He stressed on timely payment of pension to the retired teachers and scholarships to pupils Special attention should be given for qualitative improvement of school education from the primary to high school level. The Secretary, Education Youth Services Department, stressed that due emphasis is being given to primary education in the 20-point programme and to expedite this, adequate financial assistance is given both by the state government and the central government, and an amount of Rs. 50 lakhs have been earmarked for the repair and construction of school buildings. He stressed on the constitution of management committees and ensure their whole-hearted cooperation for universal provision, universal enrolment, attendance and enrolment. He appealed to the inspectors of schools to ensure more enrolment and retention of girls at the primary stage and utilize the non-formal centres for the purpose of universalization of primary education

National integration camp

THE inter-state student-teacher national integration camp was held in the Government Girls High School, Puri, from 1-15 June 1982, under the auspices of the NCERT, New Delhi. Ten teachers and 45 students from Chandigarh, Delhi, Rajasthan, West Bengal and Orissa attended the camp. Smt. Sarla Das, Headmistress, Govt. girls High School, Puri, was the Camp Director The Field Adviser, NCERT and his staff assisted the Camp Director in organizing the camp visited the camp from time to time. Inaugurating the camp, the Education Minister, Orissa, emphasized the role, uniformity and standard of education in fostering national integration and national character. Eminent persons of the state and the Centre attended the camp and addressed the campers on the historical and cultural heritage of India emphasizing its unity and oneness in spite of the existence of diverse languages, religions, customs and traditions. In his valedictory address Sri H. Mahapatra, Retd. Justice, Patna High Court, analysed the circumstances when the people of India were integrated under Gandhi, Nehru and Mrs. Gandhi—to attain independence and to ward off foreign invasions. Finally he stressed on the point that nationalism is a means to attain internationalism for which there have been attempts in the past and efforts are being made at present. This would lead to a peaceful and healthy world government, which would lead to the development of a world family Sri C.M. Poonacha, Governor of Orissa in his address appealed for the introduction of unformity and standard in education, the shape of textbooks and curricula, for the whole country for bringing national integration. □

Book Reviews

Teaching Physical Sciences in Secondary Schools. By K GUPTA, Sterling Publishers Private Limited, New Delhi, 1981, pp vi+184.

INCLUSION of science in the school curriculum as a core subject may be regarded as the most important development in Indian education of post-independent era. It is needless to emphasize the immense material benefits of science education, but even more profound is its contribution to culture, and cultural and social change. In the new pattern of education, science is being taught to child right from the very beginning of the primary education. At the middle and secondary stages of education, science is being taught with disciplinary approach. To cater to the objectives of science education, most of the teacher education colleges in India have revised their courses of studies and framed curriculum for preparing pupil-teachers for teaching physical sciences and biological sciences separately. But no attempt was made by the teacher-educators to write books on teaching either physical sciences or biological sciences. The students at the pre-service education course have been facing great difficulties due to non-availability of books on physical sciences and they had to content themselves with the books on teaching of science which are easily available in the market. The attempt of the author in writing a book on teaching physical sciences is, thus, commendable

The book has been divided into two parts. The first part deals with methods and techniques of teaching physical sciences, though the author under the spell of the charm of modern terminology calls it methodology and technology of teaching physical sciences. The second part deals with the content side of the physical sciences. In an attempt to condense the two aspects of teaching physical sciences in secondary schools into one small volume, the author had to sacrifice the elaboration of many important considerations of teaching physical sciences. The first part divided into eight chapters deals with (*i*) definition of physical sciences, (*ii*) aims of teaching physical sciences, (*iii*) methodology of teaching physical sciences, (*iv*) laboratory and kits for physical sciences, (*v*) technology of teaching physical sciences, (*vi*) planning physical sciences instruction, (*vii*) the practical work in physical sciences, and (*viii*) evaluation in teaching physical sciences. A chapter on the history of teaching science

would have been immensely helpful in the understanding and appreciation of its present practices and programmes

The book, though a useful one, lacks in organization. The author has described the problem-solving method, the heuristic method and the project method. All these methods have some common points and the author should have discussed the points of similarities and dissimilarities and also the situations in which a particular method could be more effective.

The second part which is the content part of teaching physical sciences has ten chapters which include (*i*) theory of relativity, (*ii*) radio activity, (*iii*) wave nature of particles, (*iv*) theory of transistors, (*v*) atomic structure, (*vi*) carbon—the basis of life, (*vii*) acquous acids and bases, (*viii*) oxidation—reduction and reactions, (*ix*) chemical bonds, and (*x*) concepts used in teaching of physical sciences.

These topics, I hope, will serve the purpose of content enrichment programme of the B.Ed. students.

R. P. SINGH
Dean, Faculty of Education, Patna University

REVIEWING BRIEFLY

A Critique on Educational Evaluation Research SAMANT CHITTA R Academic Consultants, Tulsipur, Cuttack, pp 79, 1981 Price Rs 15 00

THE present publication purports to fill the need for a good book in a rather narrow area of educational evaluation The author is quite aware of the existence of several standard books in this field but understandably enough they do not meet the requirements of a less sophisticated audience than that of post-doctoral workers Required for the application of cost-benefit analysis, social audit, etc. the persent publication should help the evaluative researcher where the goals are imprecisely stated One may particularly like to read the chapter titled 'Ethical and political factors affecting evaluative research' because it deals with an important bias in social science research The author states "Because of the deep-seated impact of the ethical and political factors upon evaluative research, more attention is necessary to formulate alternative methodologies" Perhaps here the author should have talked of the hypocritical middle class norms only.

A good book, beautifully produced.

Curriculum Development for the Indian Schools (Kum.) D.R PORTIA Satyavani Publications, P B No 80, Kakanada, pp 112+iv. Price and year of publication not mentioned.

MEANT primarily to be a textbook for the students of M A (Education) and M. Ed., the present publication contains useful information for the lay and the informed audiences too. Curriculum development in India does not have a long history unless one wanted to trace the ancient Aryan or the Buddhist courses of study developed in all branches of learning In fact any comparison with the ancient system would be so much irrelevant too. For us, therefore, it is better that we talked of its recent Western origins alone—something which the author attempts admirably.

A useful publication indeed.

Glimpses of Education in Haryana S S. KAUSHAL. Rakesh Prakashan, Delhi, pp. 118, 1981, Price Rs. 15.00.

THE present publication deals with the educational development in the 15-year old Haryana State alone. Haryana is one of the very few progressive states in the country with a bright future. The development of any state is directly correlated with the state of its education and, therefore, it is no wonder if Haryana has done so well as compared to many states

Haryan has undertaken several new programmes and is on the point of having its +2 system. The author makes a suggestion of administering education on the zonal pattern—something several states already have. In any case, the author discusses his points of view against the background of his own rich experience in the field. He deserves attention of all those who matter.

A serious study which has been nicely got up as well.

Indian Education in the Emerging Society, J. MOHANTY Sterling Publishers Pvt. Ltd , New Delhi, pp. 205, 1982 Price Rs. 60.00

THE present publication is a textbook meant for M.A M.Ed./B.Ed. students who have to offer a paper on Indian Education or current problems in Indian Education, etc. Divided into three sections the book also attempts to cover one more paper called the social and philosophical foundations in education The treatment of the subject-matter is such that it would meet the requirements of the courses prescribed in several universities.

A nicely brought out textbook.

NEERJA SHUKLA

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TO OUR CONTRIBUTORS

FIE invites articles/papers on the impact of educational research on classroom practices/ policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Education and the Culture

A QUESTION that is frequently asked pertains to the fact What is the nature of influence schooling has on people? We are surely worried about the relationship between education and culture. We also think, quite rightly too, about the type of influence schooling has on a person. There is a very vocal school of thought which holds that education is an extremely important medium of cultural revolution. It also believes that literacy programmes improve the quality of people's life. The other school of thought does not disclaim these influences but doubts the degree of their impact. Education by all standards and norms of life does influence and brings about changes in the character of people but firstly these influences are superficial and secondly it takes generations before it is able to change the cultural groups of people.

Education, the sum total of schooling, brings about chemical change in one's outlook, manners and general behaviour. An 'educated' person would start thinking differently as against his illiterate counterpart. Not only would his idom differ, his attitudes find logical bases, his sense of discrimination increases but his level of general understanding of things, material and abstract, would also undergo a sea of change This process is neither abrupt nor irrational. What really happens is that education slowly and gradually helps a person borrow someone else's norms and also helps transform one's behaviour It is not an open process in the sense that we cannot perceive these changes. The change is slow, halting and is normally resisted A person would like to fall back upon the resources he once had, be that a dialect, accent or idiom. Not only would he not like to change his food habits but dress and mannerisms would also continue to show obvious traces of his likes and dislikes he had once. For example, the sipping of tea to taking tea is a long jump in many a case and is taken at the cost of one's injured dignity. The so-called cultural lapses continue to attach themselves and make one look funny, inadequate or plain because it is so difficult to eradicate them. The standardized norms of behaviour and the formality of

conversation are the two of the several indices of culture. Both literacy and education in their own ways try to achieve these goals. Do people achieve these two easily? Certainly not, but then that remains the eventual goal. Surely no revolution is either intended or manifested

September 1982

GENERAL EDITOR

Education and Social Values in Developing Countries

S. C. NANDWANI

Reader in Economics, M.D. University, Rohtak

EDUCATION system and the social values of a country have a very complex relationship. Generally education system merely reflects the dominant values of its society and play a crucial role in bringing an engineered social change in that society However, there can and do arise situations in which real tensions exist between the dominant values in the society and those that predominate in the educational system Moreover, educational system also acts as an instrument of social planning Which students are admitted in the university, what they are taught, how their life is organized and who taaches them, all of this influences attitudes and values of a particularly important stratum of society.

The British designed their educational system in the 19th century with the objective of making a 'cultured gentleman' knowing something about every aspect of human knowledge, well-mannered and active participant in public discussion. While the educational system of the developing countries, far from transmitting the culture, is rather part of the forces that are eroding the traditional society. The educational system continues to be an inferior transplant, established by the colonial power. It has not been in origin entirely a product of indigenous effort or aspiration, nor is it, even today after decades of independence, an integral part of its society. Its influence on the values of its society has been great. The colonial educational institutions were elitist in every aspect of their life, fitting the objectives of the colonial power. They sought to produce an indigenous elite, culturally and intellectually similar to the colonial administrators and able and willing to work in harmony with them As such the intrusion of traditional social values and attitudes were not allowed.

The Third World is in need of profound revolution of its educational institutions. A strong and vested group of men have

assumed power to administer virtually the same scholistic, medical and educational institutions mainly to cater to their own interest They are highly unproductive with respect to the egalitarian purposes for which they are being reproduced. The result is the production of an elite separated in many ways from its fellow Indians. The members of this elite are educated to see themselves members of the Platonic elite. They, however, demonstrate the positive aspects of their training and of the inculcation of those values by their capacity after independence to accept substantial and rapid increases in the responsibilities that they carried. The negative aspect of all this is that their confidence in and understanding of their indigenous culture are often thoroughly undermined. Their social and cultural interests are divorced from their Indian roots and their economic aspirations are out of harmony with the poverty of their country.

With the political independence and 30 years of planned development, Indian education system has to find ways to become *Indian* It has yet to modify and adapt the colonial education system to cater to the needs of development, and social justice if it cannot abadon the same. In the presence of incompatibilities between the value system of the dominant social classes and that of the education system, it is better to abandon the system and constitute the new The Third World is in need of a profound revolution of its institutions. The revolution of the last generation were overwhelmingly political. A new group of men with a new set of ideological justifications assumed power to administer fundamentally the same scholastic, medical and market institutions in the interest of a new group of clients Since the institutions have not radically changed the new group of clients remains approximately the same size that previously served. This appears clearly in the case of education Per pupil cost of schooling is today comparable everywhere since the standards used to evaluate the quality of schooling tend to be internationally shared Access to politically financed education considered as access to school everywhere depends on per capita income.

Everywhere in the Third World modern institutions are grossly unproductive with respect to the egalitarian purposes for which they are being reproduced But so long as the social imagination of the majority has not been destroyed by its fixation on these institutions, there is more hope of planning an institutional revolution in the Third World than among the rich. Hence the urgency of the task of developing workable alternatives to modern solutions.

Underdevelopment is at the point of becoming chronic in many developing countries Education offers a good example of making a start to do away with this underdevelopment. Chronic underdevelopment occurs when the demand for schooling becomes so widespread that the total concentration of educational resources on the school system becomes a unanimous political demand At this point, a separation of education from schooling becomes impossible.

Education and Culture

The educational system of the developing countries far from transmitting the culture is rather part of the forces that are eroding the traditional society. The system finds in the tradition nothing more than a universal culture of poverty which cannot possibly stand development. As such, educational system acts as a destructive agent of the past traditions and values and it has yet to define its new cultural role. The traditional social system is taking time to break Nuclear family is only an urban

phenomenon. Religion has not lost its authority Under the circumstances, the educational system must provide to the youth a new code defining his rights and obligations and modes of behaviour in relation to other categories of persons. He needs a new code of social ethics. The new middle class has, therefore, to grow into an ethical code that is not a part of its tradition. It is the old ethical code common to all those religions and philosophies that are society-oriented rather than spirit-oriented, but it has to be articulated in new circumstances.

Unfortunately, the education system has not been able to perform its role adequately so far as the cultural content is concerned. Our youth, however, much admired for its technical proficiency, tends to be scorned for his lack of social conscience, his desire to grow rich quick and his lack of responsibility in dealing with his clients Perhaps the fault lies with the too secular nature of our educational code. When education becomes secular, it is robbed of the spiritual content and becomes amoral. It is then euphemistically called scientific.

> With recent revolt of youth in most parts of the world, who misconstrue liberty as licence, who prefer self-indulgence to self-restraint, who consider any norms of discipline as outmoded, and who want to create a permissive world, in which full rein may be given with impunity to any passing impulse of sensuality, a challenge is posed before thinkers all over the world that if this tidal selfish spree of sensuality is not stemmed would human progress in the right direction continue and humanity saved ? With religion replaced by carnality and materialism, and spirituality banished by secularism with faith spirited away skepticism will modern education and technical advance enable man to realise his own destiny.

The educational system of today has added responsibilities for preparing the youth to discharge their obligation as citizens of a plural society. It has to train its young people for the great task of equipping them with the necessary moral and mental qualifications not required two decades ago. Most of us share the general feeling of disappointment that the intellectual and moral standards have suffered during recent years. The reason for this regression is that the term education has lost its meaning and efforts are directed towards severing the link with our cultural past. Our tradition which has been handed down to us from generation to generation is being obliterated by the modern secular educational system. Time has come for cultural re-orientation being linked with education.

Education and Art

The educational system of our society seems to be particularly barren in the field of aesthetics. Art and leisure go together and only the middle and the upper classes could afford it. Our students, by and large, do not have this background They come from homes that do not have a book and parents are illiterate. Their chief objective of coming to the school is to equip themselves with some basic knowledge that enables them to earn their livelihood. The developing countries are confronted with yet another problem that of what culture is to be transmitted Plural societies like that of India, have superb tradition of music, painting, sculpure and architecture, yet it has to redefine its cultural role in the new setting in order to avoid a violent reaction. But culture cannot be put into water-tight

compartments and separated. As Lewis puts it .

> I think that the whole human achievement, whatever its geography, is part of the heritage of each one of us, wherever he may be, and that the cultured gentleman who neglects the opportunity of benefitting from the aesthetic experience of all nations is the poorer for doing so.

Education and the Plural Society

India is not a homogeneous country but deeply divided by religion, language and caste. The economists stress that the basic division in our society is between the haves and the have-nots Bitter experience has shown (currently in the states of Assam, Gujarat and the Punjab) that vertical division has trivial political significance when compared with the horizontal rifts. Our educational system also could not come out of these parochial links We have universities for different racial, religious or language groups. Yet another pressure is to fix quotas for the minorities and socially backward people in the educational institutions. Of late, it has met with resistance in some parts of India, for example, Gujarat was violent recently on the issue of reservation of seats in the medical colleges of the state. Of course, it is wrong to exclude well qualified applicant of caste A in order to admit a less qualified applicant of caste B. The objective should be that the educational institutions should have enough places for all those who qualify. Such a thing is right if all students have equal opportunities to prepare for admissions. But reservations are needed to combat prejudice such as that against admitting women to medical schools and socially backward people of various kinds. This, of course, is done at the great cost. All plural societies have to pay this cost since one's ability to pass the competitive tests depends not only on innate intelligence, but also on family and social background. If members of only one group have the appropriate background, the competitive test serves only to solidify an existing social structure, in which caste and other inequality is embedded. It is difficult to break this vicious circle without insisting on quotas reserved for the underprivileged. The case of positive discrimination is strongly recommended in such societies.

Plural societies are characterized by certain conditions of cultural diversity and social cleavage that arise from the contact of different peoples and cultures within a single society. There is the second tradition of plural society in which the pluralism of the various constituent groups and interests is integrated in a balanced adjustment which provides conditions favourable to a stable democratic government. It is held that pluralism is consistent with diverse political positions and provides a basis for liberal democracy. That is to say that liberty and democracy tend to be strong where social pluralism is strong. Thus, it is thought that the conflict model of plural societies is a passing historical phase, for two reasons. First, the spread of a uniform youth culture. The young people even in the Third World model themselves upon the young people in London or New York, whose dress, drugs, music, dances, religion and attitude to parents and teachers now set the fashion for young people throughout the rest of the world. If the young of all religions make themselves a common culture, then all other cultures will die out. But let our educational institutions be able to retain what is best with us. As Gandhi has put it, I want the doors and windows of my house to be open to the cultures of all the world, nevertheless I would not like it to be blown by that culture.

An important task of education that is being overlooked is to discipline the mind to self-control by holding passions, prejudices and evil tendencies under the restraining influence of rational mind. Education fails in its aim if it neglects character development and does not develop a sense of right, duty and honour. It has often been said that the poorest education that teaches self-control and the worst education which teaches self-denial is better than the best which omits it. Cultural content in education was best summed up by Isocrates some two thousand five hundred years ago. He said:

> Whom then I call educated ? First, those who manage well the circumstances which they encounter day by day, and who possess a judgement, which is accurate in meeting occasions as they arise and rarely miss the expedient course of action, next those who are decent and honourable in their intercourse with all men, bearing easily and good naturedly what is unpleasant and offensive in others and in being themselves as agreeable and reasonable to their associates as it is humanely possible to be. Furthermore those who hold their pleasures always under control and are not unduly overcome by their misfortunes, bearing up under them bravely and in a manner worthy of our common nature Finally, and most important of all, those who are not spoiled by their successes and those who do not desert their true selves, but hold their ground steadfastly as wise and sober-minded men, rejoicing no more in the good things which have come to them through chance, than in those which through their own nature and intelligence are theirs since birth. Those who have a character, which is in accord, not with one of these things but with all of them—those I maintain are educated and whole men possessed of all the virtues of a man.

Education and Religion

Religion has an extremely important role in the making of man. Education devoid of religion is valueless and scientific. Without ethical education man is making weapons to destroy his own race. Our late President Rajendra Prasad said in a convocation address on 5 March 1950

> Religion or spiritual outlook is important in moulding the life of a student By religious outlook I do not mean dogmatism, ritualism or fanaticism or even blind faith, but something by which character is continually affected. It should be the aim of our educational institutions to produce healthy, earnest and principled men and women who will prove themselves worthy in the service of the nation

In the same vein, Dr Radhakrishnan spoke on 'Religion and its place in human life' on 12 August 1954

> When India is said to be a secular state it does not mean we as a people reject the reality of an Unseen Spirit or the relevance of religion to life or that we exalt irreligion It does not mean secularism itself becomes a positive religion or that the state assumes divine prerogatives. Though faith in the Supreme Spirit is the basic principle of Indian tradition, our state will not identify itself with or be controlled by any particular religion. This view of religious impartiality has a prophetic role to play within our national life. No group of citizens shall arrogate to itself rights and

privileges which it denies to others No person shall suffer any form of disability or discrimination because of his religion All alike will be free to share to the fullest degree in the common life. This is the meaning of secularism.

Thus we should not distort secularism so as to confuse it with irreligion. Education bereft of culture produces barbarity and bestiality in man Pogroms of Hitler and Yahya Khan portray an excellent picture of the uncultured literates. A true secularist should find the areas in which all faiths can work together without disputing the areas in which they disagree Education's end-product should not be a man's knowledge, but a man's culture □

Attitudes in Vital Areas

A Comparative Study in Different Types of Schools

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ACCORDING to Kretch and Crutchfield, the attitudes are "the enduring organisation of motivational, emotional, perceptual and connative processes with respect to some aspect of the individual world". Allport in a similar vein defines attitude as "mental and neural state of readiness exerting a directive influence upon the individuals' response to all objects and situations with which they are related". Thus attitudes having directive influence upon a response, providing the emotional tone to a behaviour and motivating a person to act in a particular situation, assume great importance in the personality make-up of an individual. They provide a certain amount of consistency to the behaviour of an individual and help in predicting the response in different situations.

How and in what direction are these important personality variables being developed in different types of schools is not only important for the parents to know but is also equally important for the educationists, administrators and planners, so that correct decision is arrived at about the future educational set-up of the country. Unless the attitudes in the vital areas, which affect the entire social set-up, are measured objectively no verdict can be given about the role of the schools in developing the attitudes For this very purpose an attitude scale, especially designed by the author, was administered to the boys of different types of schools patronized by the parents and the mean scores in different areas shown by the students in these schools directly compared.

The Attitude Scale

The scale covered four vital areas, viz. life and humanity, society, morality and religion. It was developed on a sample of boys from each type of school, i.e. Sainik, Public, Convent, General, Theosophical and Sanskrit Pathshala. The scale consisted

of 80 items, 20 in each area. The positive attitude earned one mark for each item and the negative attitudes score −1. Thus the maximum marks ranged from 80 to −80 through zero. The split-half reliability of the scale worked out to be .90.

The Sample

For the present study, the scale was administered to 390 boys of all types of schools, the break-up being as under :

School	*No. of boys*
1. Rajghat Public School, Varanasi	29
2 Lucknow Sainik School, Lucknow	44
3 Boys High School, Allahabad	34
4. Lamartinier College, Lucknow	75
5. K.P College, Allahabad	30
6. Queen's College, Varanasi	40
7 Basant Theosophical School, Varanasi	71
8. Sanskrit Pathshalas, Allahabad and Varanasi	67
Total	390

The students belonged to Class X or equivalents and above and the age range was 15 years and above It was ensured that the students had schooling for three years or more in the institutions, so that the school sub-culture had its toll on them. At this age the attitudes also attain some degree of maturity.

Treatment of Data

The responses of the students were scored according to the key and method of scoring. The scores were totalled separately for each area and combined scores of all areas put together. The mean and SD of each type of school were worked out separately for each area as well as for the combined total The comparative figures are given in Table 1. It shows that means in all the areas of all types of institutions are positive but on the lower side, which indicates that the positive attitudes are not very firm and definite. The positive degree is merely marginal in most of the cases. The wide variations almost of the same dimension as the

TABLE 1

COMPARISON OF MEAN SCORES AND DEVIATIONS OF DIFFERENT TYPES OF SCHOOLS

Areas	*Public (N=73)*		*Convent (N=109)*		*General (N=70)*		*Sanskrit (N=67)*	
	M	O	M	O	M	O	M	O
L and H	10.99	5.02	4 52	6.37	7.70	5 28	6.19	5.45
Society	5 93	5.56	4.36	5 86	2.21	5 25	2.42	4 95
Morality	12 14	4.85	8.23	7.47	6 46	6 20	4.61	6.46
Religion	6 50	6.98	8.74	8 16	6.10	7 37	10.00	6 30
Total	35.05	16 90	25.85	20 95	22.48	16 82	23.22	17.92

	Combined (N=390)	
	M	N
L and H	6.36	6.15
Society	3.72	5.55
Morality	8 19	6.79
Religion	7 73	7 51
Total	21.00	18 77

means, on the other hand, indicate that the individual differences are considerable in almost all the areas It may be due to various background factors, viz upbringing, family beliefs and values, influence of the neighbourhood and the membership of various other social groups It points to the possibility that the group means are not the outcome of the school sub-culture alone and it cannot be asserted that the attitudes developed in various institutions are only as a result of the schooling. What contribution does each school make will be known through further statistical analysis (Table 2). When group means of different schools in

groups remains positively significant.

2 In convent schools the attitudes in all other areas except life and humanity are not significantly different from the combined population. Towards life and humanity the attitudes of convent school boys are significantly less positive, though they are disposed of in a comparatively more positive way towards morality and religion

3. In general schools, moral values are probably less emphasized which makes their attitudes towards morality less positive as compared to

TABLE 2

SIGNIFICANCE LEVEL OF SCHOOL MEANS AS COMPARED TO THE COMBINED POPULATION

Areas	*Public*	*Convent*	*General*	*Sanskrit P*
L and H	P<.01(+)	P<.01(—)	NS	NS
Society	P<.01(+)	NS	NS	NS
Morality	P<.01(+)	NS	P< 05(—)	P< 01(—)
Religion	NS	NS	NS	P<.01(+)
Total	P< 05(+)	NS	P< 05(—)	NS

different areas were compared with the combined population, we found that :

1. Difference between the combined population means and public school boys means in three areas, viz. life and humanity, society and morality is highly significant. It means that attitudes of the public school boys in all these areas are significantly more positive than combined population. In matters of religion the difference is not significant. The overall difference between the two general population Although the difference in other areas is not significant, the deficiency in each area, when totalled up, creates the difference with general population significant at .05 level.

4. In case of Sanskrit Pathshala boys, the difference between means of morality and religion, when compared with combined population, is highly significant, while their attitude towards religion is positively more positive, the attitude towards morality is significantly less positive. In

other areas, the difference is not significant.

Thus the comparison reveals superiority of public schools in all the areas except religion where Sanskrit Pathshalas are definitely ahead of them In convent schools, life and humanity are ignored, whereas morality is at stake in general schools. Overall attitudes developed in general schools are less positive than the combined population

When the mean scores of different institutions in different areas were compared with each other, the following picture emerged (Table 3).

nity and have an edge over Sanskrit Pathshalas in morality.

When the mean scores of the four vital areas are compared within each type of school, the difference among them is found significant. Theoretically speaking the four areas are highly correlated. Religion functionally speaking is meant to sustain the society and morality is the soul of religion. Without morality, religion turns into mere dogma and hollow rituals These three are supposed to develop positive attitude towards life and humanity However, the wide variations in these areas within each type of school, present somewhat disturbing picture

TABLE 3

MEANS SCORES OF DIFFERENT TYPES OF INSTITUTIONS

Area	*Public*	*Convent*	*General*	*Sanskrit*	*Combined*
L and H	10 99	4 52	7.70	6 19	6 63
Society	5 93	4 36	2.21	2.42	3.72
Morality	12 14	8.23	6.46	4 61	8 19
Religion	6 50	8 74	6.10	10 00	7.73
Total	35.05	25.85	22 48	23.22	18 77

Table 3 indicates that .

1. General schools have the lowest mean scores in the two areas society and religion. Convent schools have the lowest score in life and humanity and Sanskrit Pathshalas in morality.
2. Public schools show the highest positive mean score in all the areas except religion where Sanskrit Pathshalas are at the top.
3. Convent schools emerge second best in all areas except life and humanity.
4. General schools find the second place only in one area, i.e. life and humanity and have an edge over Sanskrit Pathshalas in morality.

I. In public schools the difference between the mean scores of society and religion are significantly different from those of life and humanity and morality.

2. In convent schools the mean scores of life and humanity and society on the one hand and those of morality and religion on the other are significantly different.

3. In general schools, the scores for society is significantly less positive than other areas.

4. In Sanskrit Pathshalas the variation in all the areas is significant, except between life and humanity and morality
5 The combined population mean for society, is also significantly lower than other areas.

The variation suggests that the values in the young minds are in a state of flux. The old values have not yet been completely uprooted but the doubt about their validity lurks prominently in their mind The values in various fields appear to have gained some sort of autonomy and no longer remain linked with one another. On the one hand morality and religion are delinked in Sanskrit Pathshalas as well as public schools, on the other hand, life and humanity and society are no more linked in general schools as well as public schools Society and morality have fallen apart in almost all types of schools whereas religion is at variance with society in all the schools except public schools. It appears that certain pockets of values have been developed in different individuals that have lost their permeability and yet are not firmly rooted in perspective The gap between the preachings and practices of the adults create the confusion worst confounded for the youngsters. The firm and lasting values in this confusing state are not possible to be formed in the early stage of the life of the students and some sort of vacuum is created in their minds. The result is that neither religion nor morality serve the cause of the society.

Conclusions and Suggestions

In coformity to the general opinion public school boys develop more positive attitudes in the areas of vital importance to society. Convent school boys come next and general school boys can be rated as the lowest. In Sanskrit Pathshalas religious practices appear to be highly emphasized while morality and society are ignored. However, these values are generally marginally positive and the old values appear to be in a state of flux. They are not firmly rooted in perspective which may partly be due to the gap between the practices and preachings of the adults who are responsible to plant proper values in the minds of the children

The parents, educationists and administrators should take serious note of the falling standard of social values in general schools, morality in Sanskrit Pathshalas and life and humanity in convent schools. The falling standard in all these areas are partly the reflection of the society at large and any further neglect may create crisis of character and conditions of chaos in our value system. □

A Critical Study of an Objective Type Test

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THE main purpose of an examination is to discriminate between the able and less able students. It is, therefore, necessary that an examination should produce a spread of scores, in other words, it should discriminate between students. Objective type tests do this at least as well, and possibly better than other forms of examination and as a result of this they are gaining popularity day by day. There are strong educational reasons for the use of these tests The first and the foremost advantage of these tests is that the score of a particular candidate on it is independent of the marker, i e. they are objective in marking and are not subject to the decisions of individuals. Secondly, they do not require too much of time for the announcement of results Thirdly, they can cover a long range of syllabi and, therefore, can test the cognitive abilities of the students on a wide range. Fourthly, they are found considerably good in discriminating between higher ability and lower ability students and, therefore, can be freely used for summative as well as for formative evaluation.

Objective type tests are of many kinds, namely multiple-choice, multiple-facet, constant alternative, matching, rearrangement, relationship-analysis (assertion-reason type), etc The most versatile form of them is multiple-choice type. The discussion here will be confined only to multiple-choice type items.

Multiple-choice Item

The structure of a multiple-choice type item consists of two important parts, namely stem and the options. Stem is the first part of the item It contains the necessary information and is particularly meant for posing the question Options are the second part of the item and consist of the distractors which may be three, four or five and the correct answer which is commonly known as key. Each multiple-

*The author is extremely grateful to Prof V Natarajan for his valuable guidance and suggestions in preparation of this paper

choice type item, therefore, has one and the only one predetermined answer. The distractors are the incorrect options. The quality of a multiple-choice type item depends upon the quality of the stem and the effectiveness of the distractors In regard to the stem, there are certain basic principles to be followed and once they are followed, the quality of the stem is assured In respect to distractors, it is noted that higher ability students must be able to ignore them while lower ability students must be attracted towards them This in effect, would enhance the discrimination of the key or correct option. It must be noted and appreciated that item facility and item discrimination are calculated with respect to the correct answer

Item Analysis

Item analysis is a technique in which the students' responses are studied with respect to the individual items The quality of an item is judged with the help of this technique. Item analysis yields information of two main kinds, namely facility value and discrimination index. The simple methods used for calculating each of these statistics are given below.

Facility value (FV) These are simple statistics which show how easy or difficult an item has proved to be It can be calculated with the help of the following formula :

$$FV = \frac{R}{N} \times 100$$

Where R=Number of correct responses to item
N=Total number of students attempting the item.

Discrimination index (DI) : These statistics show the degree to which a particular item discriminates between the higher ability and lower ability students. It can be calculated with the help of the following formula

$$DI = \frac{N_H - N_L}{n}$$

Where N_H=Number of correct responses obtained by the top third (or 27 per cent higher group) candidates
N_L =Number of correct responses obtained by the bottom third (or 27 per cent lower group) candidates
n=Number of candidates constituting one-third (or 27 per cent) of all the candidates who took the test.

The discrimination index of an item can be anything between −1 to+1. The two extremes would be .

(*i*) $n=20, N_H=20, N_L=0$

Therefore, $DI=\frac{20-0}{20}=+1$

(*ii*) $n=20, N_H=0, N_L=20$

Therefore, $DI=\frac{0-20}{20}=-1$

and in the middle :

(*iii*) $n=20, N_H=20, N_L=20$

Therefore, $DI=\frac{20-20}{20}=0$

In the first case the item is discriminating totally between the able and less able students and is making maximum contribution to the total discriminating power of the test. In the second case the item is also discriminating totally but in the opposite direction, i e. the able students are answering incorrectly and vice-versa. This item, therefore, is decreasing the discriminatory power of the test. In the third case the item is making no distinction between the able and less able students. It is having neither a positive nor a negative effect on the discriminating power of the whole test.

Purpose

The main purpose of this paper is to make a critical study of an objective type test with reference to the conventional test and item analysis. An attempt has also been made to highlight the stability of these statistics particularly the stability of FV and DI values. A new method of item analysis has been suggested which can provide more stable values of these parameters.

Test Paper

The test with 150 items was tried on a sample of 221 medical students. All the items of the test were related to their subjects. The test was divided into three different sections, A, B and C. Seventy five items, each provided with four suggested answers, were included in Section A. Section B was provided with 48 true and false items Twenty seven items, each provided with five suggested answers, were included in Section C.

Administration and Scoring

The test was administered to a sample of 221 medical students. They were given a three-hour duration to complete the test. The students were asked to attempt all the items and to record their responses on a separate response sheet. All the answer sheets were scored with the help of a scoring key especially designed for the test items All the items were dichotomously scored and their scores were tabulated for further analysis.

Test Analysis

Various statistical techniques were applied to the data to study the test results. The different values like mean, mode, median, standard deviation and standard error of the mean were calculated The data were also analysed with the help of analysis of variance technique to provide estimates of components of variation and to make valid conclusions.

Interpretation of the Results

Some desired statistics obtained from the test results are given in Table 1.

TABLE 1

Mean	78.90
Median	77.00
Mode	77.00
SD	15.06
SEM	1.013
Reliability by KR-20	.875
Reliability by KR-21	.840
Cronbach Coefficient alpha	.875
Index of measurement efficiency (IME)	940

The range of the marks secured by the students on this test of 150 items is found in-between 46 and 111. The minimum marks obtained by the students are 46 and the maximum 111. The mean value of the test is 78.9. It is seen from the range of the marks (the table of the marks is not shown due to the space problem) that a few candidates, say only 9.5 per cent of the total population have secured 100 and more than 100 out of 150 marks.

Half of the candidates have secured less than 51 per cent marks on the test. The median of the test which indicates the middle candidate's score on the test is 77. It signifies that 77 is that point on the scale of measurement above which are exactly half the cases and below which are the other half and this is of course very true if we look at

the marks of the candidates The mode of the test which indicates the maximum frequency in a distribution in this case happens to be exactly similar to the median value (77). As many as nine candidates have secured 77 marks out of 150. The identical values of mean, mode and median prove it beyond doubt that the test itself is a perfect one. The standard deviation of the test is 15 which indicates that the spread of marks can be anywhere within the range of 33 to 123 and this of course is quite true in this case as is reported above It also indicates that majority of the candidates would have secured their marks within the range of 64 to 94 and this is also true in this case As many as 65 per cent of the cases are found within this range, only 19 per cent of the cases are found above and 16 per cent of the cases found below this range. It further signifies that the marks obtained by the candidates are normally distributed The standard error of the mean of the test is 1.015 which indicates that the limits of marks within which the arithmetic mean will lie if we are to give this test over and over again would be only 1.015 or it signifies that the limit of tolerance of mean is 1.015. The reliability of the test calculated by different methods is fairly high, i.e. as high as 0.875. It further signifies that the test items are nearly equal in difficulty and hence the reliability of the test is quite high.

Hypotheses

The data were also analysed with the help of analysis of variance technique for which the following hypotheses were formulated:

1. The individual candidates will not vary significantly on the test items
2. The test items will not have any significant difference on the individuals' scores

In order to test the above-mentioned hypotheses, the analysis of variance technique was used to provide estimates of components of variation and to make valid conclusions The summary of the complete analysis of variance is given in Table 2.

Analysis of Variance

To study the effect of individual student on the test items and also the effect of test items on individuals' scores, the data were analysed with the help of analysis of variance technique. The hypotheses formulated earlier were tested on the basis of the F-values given in Table 2.

Hypothesis 1 This hypothesis states that the individual candidates will not vary significantly on the test items.

TABLE 2

F-VALUES

Source of Variation	*Sum of Squares*	*Degrees of Freedom*	*Mean Square Error*	*Variance Ratio*
Examinees	334.335	220	1.519	8.0177*
Items	1717.503	149	11.526	60 8139*
Remainder	6213.234	32780	0.189	

* Significant at .05 and also at .01 level

It is seen from Table 2 that the calculated value of F in relation to examinees is greater (F=8.177) than the tabulated value, therefore, the null-hypothesis is rejected It means that the individual candidates differ significantly on the test items. The F ratio for examinees is significant beyond 01 point, leaving us with considerable confidence that the examinees' difference, as such, have a real bearing upon the difficulty of the items of the test. It further signifies that individual students differ in their performance on the test.

Hypothesis 2: This hypothesis states that the test items will not have any significant differences on the individuals' scores. It is seen from Table 2 that the calculated value of F in relation to items is greater (F=60.813) than the tabulated value, therefore, the null-hypothesis is rejected. It indicates that the test items have significant difference on the individuals' score. The F-ratio for items is significant beyond .01 point, leaving us with considerable confidence that the items, as such, have a real bearing upon the individuals' scores. It further signifies that the hard items are correctly answered only by those students who scored high in the test as a whole

Facility Value and Discrimination Index

The facility value of an item indicates how easy or difficult it proved to be. Usually the facility value of an objective type test item should range from 20 to 85 (25 to 85 per cent). The facility values calculated for these 150 items are found in-between .15 to .97. There are only a few items with .15 FV. The discrimination index is an important item analysis characteristic for an objective-type test item. The items within the range of 0.2 to 0.6 DI are considered very good items.

If we look at the FV and DI values of individual items which are not shown here due to the space problem, it seems that there are a few items which need further improvement. There are 20 items in the test which have got high facility values It indicates that these items are easy items and they are correctly answered by a large number of students. Against this there are 12 items which have got less facility values It shows that these items are hard items and they are correctly answered only by a few students that is why their facility values are less. It is, therefore, statistically proved that the items in the test are proportionately included. It shows an ideal combination of some easy, some hard and some medium items. In fact, easy and hard items which are contrary to each other have approximately an equal load on the test as a result of which there is a very good balance. Majority of the items are of medium difficulty and this is a very good sign of a well planned test. On the basis of these statistics we can precisely say that this test out of 150 items contains 12 hard, 20 easy and 118 medium items, which of course seems to be a very good combination.

For the psychological point of view we must have some easy items in the test (preferably in the beginning of the test) so that the students should get some positive reinforcement by solving them. If one does not give the easy items in the test, the students may get nervous. Against this, since we have to discriminate between the candidates of higher ability and lower ability which is the first and the foremost purpose of the test, it is necessary to include some hard items which could be solved only by the higher ability students. Apart from these two types of items, i.e. hard items and easy items each test should have some items of medium difficulty.

It is seen from the DI values that there are 25 items which have got negative DI values It means that these items have failed to serve their purposes or in other words these items have failed in discriminating the higher ability and lower ability candidates. It further signifies that these items should either be rejected or modified Apart from it there are 30 items in the test which have got less DI values. It does not necessarily mean that these items are not at all good items and, therefore, they should be rejected. They need further improvement and it would be possible either by changing the distractors of the items or by converting or remodifying the stems of the items.

The simple thing here to understand is that the item parameters, i.e. FV and DI obtained in this technique are not stable as they differ from one sample to another sample There are a very few chances to get the same FV and DI values even if the test items are administered only to the homogenous groups. There is always a possibility of standard error of measurement in every item parameter and it differs from one group to another group which ultimately affects the item parameters. If we calculate the item parameters on a particular sample and then divide that sample into higher ability and lower ability groups and then again calculate the items parameters for both the groups, we see that the item parameters do change. It is seen in one of our studies which is yet to be published that the facility value of a particular item for the whole group was 0.55 (FV calculated in fraction). After splitting the group into high scoring and low scoring groups the facility values of the same items were found 0.85 with reference to high scoring group and 0.35 with reference to low scoring group. It clearly indicates that the item parameters calculated with the help of the traditional methods are not stable since they change even in the same group Item facility and item discrimination are found to depend upon two factors, namely one the items itself and the other on the group of the persons taking the test. The parameters that are dependent on the group have very little stability even amongst similar groups and, therefore, this utility to predict the performance of similar group is very limited. Attainment scores based on these unstable parameters will not estimate true abilities of individuals.

There is a way-out to find out the solution of this problem if we use a new technique of item analysis called 'sample-free item analysis' The main aim of this technique is to provide values of item statistics which are stable from one sample of students to another even though the samples are very different or biased. In this technique the item parameters remain the same, no matter the item is answered by a group of brilliant students or dull students. If we include this technique in our testing, the greater accuracy can be achieved The technique would be explained in a separate paper. □

The Semester System

Advantages and Disadvantages

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THE University Grants Commission in August 1972 endorsed *Plan of Action* on examination reform prepared by an expert committee in 1971-72 The UGC circulated the *Plan of Action* in August 1973 and requested to give comments and suggestions for its implementation to the Indian universities. An implementation committee to advise commission on various measures of examination reforms was appointed in March 1973

Universities have taken number of steps in reforming the examination system. One of the reforms taken by some universities is semester system (others being internal assessment, question banks, grading improvement programmes like COSIP, etc. In June 1971, the UGC brought out a brochure on the principles and mechanics of the semester system. The question regarding the introduction of the semester system was discussed at Madurai Workshop held on 25-27 July 1974. The recommendations made by the Workshop are as under :

—It is generally accepted that the semester is the effective system to encourage the students to learn the lessons with intimate interaction with the teachers. However, it is felt that if the semester system is to be effective the teacher has to put in more work along with the students and the acquisition of the knowledge by the students should be continuously assessed through oral, written or supervised practicals which could be weekly, monthly and also terminal

—Comprehensive examination at the end of the second semester for which certain percentages of external examiners may be included. This would require additional facilities in terms of classrooms, library and laboratory and also increase in the existing staff pattern. The universities may consider introduction of the semester system at the postgraduate, professional colleges and autonomous colleges levels, gradually extending it to affiliated colleges.

—In the conduct of evaluation under the semester system a congenial atmosphere should be created and fear associated with the examiners should be removed by establishing the much desirable informality between the teachers and the students

Today 33 universities including three institutions deemed to be universities have introduced the semester system (in one form or the other)

Meaning

A semester is a period or a term of six months. In the USA, UK, Japan, Germany and many other countries the term 'semester' is used to denote each one of the two divisions of one academic year. An academic year can also have three divisions, each being called tri-semester

But the present practice of dividing an academic year into two terms is not the same thing as the semester system. The term 'semester' or 'tri-semester' is something more than two or three divisions of an academic year The semester system implies, in the main, organization of semester-wise courses of studies and examinations. Much more than the traditional pattern of subjects in vogue in the Indian universities, the contents of these courses are more closely knit, more varied and of inter-disciplinary nature, well organized, better structured around core, main and subsidiary content areas The system also implies evaluation of students' work at examinations and sessional work semester-wise. Depending upon the size of the quantum of work included in a course and on the number of hours of study-work in a week required of students, the semester course carries certain hours of credit.

The semester system has long been the pattern of curricular organization and evaluation in American universities A number of British universities has also adopted some features of American semester system The system has not found a congenial climate in Indian universities though about 20 per cent of universities have adopted the system in one form of the other with a varying degree of success Half of these are teaching and residential universities and other half are affiliating types, the IIT's and some of the agricultural universities too, are working according to the semester system. The Baroda University was the first university to try out this system (1950) Other universities like Aligarh, Meerut and Delhi have adopted the system much more extensively and even in the faculties of arts, science and commerce.

Semester System in India

There are only few universities which have started the semester system. The semester system in Indian universities has the following features

1. The division of an academic session into two halves and of the yearly courses into half-yearly short-courses.
2. The assumption at Aligarh, Meerut and at other places is that each semester will have at least 100 working days excluding the examination period.
3. The syllabi are flexible and inter-disciplinary in nature at Aligarh, Meerut and Delhi. At Baroda, the courses in home science are taken by the students of the Department of Home Science Faculty
4. The courses are organized on the basis of the number of hours students are required to put in for their study. These are courses requiring from one hour to four hours'

study in a week on the part of students. The courses carry the number of hour credits on the basis of hours put in by students per week for study.

5. Each course is assigned some credits. Longer courses which involve four-hour work in a week carry four credits, and smaller courses which require two-hour study carry two credits Each four-credit course carries 100 marks while two-credit course carries 50 marks.
6. A student earns credits in a course only if he passes in the prescribed sessional work and written examination for that course. If he fails or does not fulfil the requirements laid down for the course in regard to attendance, etc he can take up the same course or a new course in the next semester
7. The examination in each course can be either wholly internal or partially external. In the Baroda University the examination is mostly internal. It is partly external consisting of university examination and partly internal based on sessional work in Aligarh, Meerut and Delhi universities
8. The sessional work in the optional courses at the Aligarh University has the weightage of 40 per cent marks for subjects in which there is no practical examination and 30 per cent for subjects in which there is practical examination at the end. Obligatory courses carry 50 per cent marks for sessional work and 50 per cent for practical examination at the end of the semester
9. In Baroda University in the Faculty of Education and Psychology a comprehensive internal examination held has twice the weightage of sessional tests. A viva-voce test is there to finalize the internal records of students
10. The universities of Aligarh, Meerut and Delhi continue to use numerical marks and percentage in the evaluation of students' achievement. In Baroda, the faculties of home science, education and psychology, social work and fine arts use grades and grade points.
11. At the Aligarh Muslim University, every student is assigned to an adviser on the American pattern. This advice helps the students to work out the most profitable series of courses for him.

Advantages of the System

1. One of the advantages of the semester system is *flexibility* it achieves in the selection of courses by students. A student gets to a varying degree depending upon the curricular facilities that can be provided in a college or university, freedom of choice of courses as against none or little in existing system.
2. The second advantage is the gain of flexible curriculum of the semester system which pertains to the possibility of introducing courses on an interdisciplinary basis. The Kothari Commission has laid stress on interdisciplinary basis studies on new combination of subjects and on new methods of cooperation.
3. The third advantage lies in the improvement it does in student attendance which is at present irregular and indifferent It assures a minimum number of contact hours, as it lays down attendance requirements

in terms of hours for a course rather than in terms of certain percentage of days attended.

4 The fourth advantage pertains to the regular study habit it suits up in students. As the student is continuously being evaluated, he is placed in a situation in which he has no other alternative but to study regularly and study hard.

5 The fifth advantage is that it is suited to the level of students in composition as well as in motivation.

6 It is evident from the handbook of Aligarh Muslim University that in the semester-wise examinations, a student who fails in a course has an opportunity either to repeat the course in next semester or take another course in its place thereby saving his precious year. This reduces the drop-outs at the higher education stage.

7. The seventh advantage is that it can be adopted in teaching and residential universities as in affiliating universities. The Baroda, Aligarh, IITs and agricultural universities where the system is wholly or partially introduced are institutions of higher learning, whereas Delhi and Meerut universities are affiliating universities. The system can be introduced with internal evaluation and with grade credit system at its internal part

8 The eighth advantage is that it facilitates and tends better edge to organize summer semesters The semester system may provide a summer session as it is done in the Meerut University. At Meerut, the most popular and the most difficult courses are selected for summer sessions to enable students to earn advance credit in order that they are able to give more time to honours courses and to make up for failures in one or more courses in the preceding semester examination. Summer courses may be taken even by students who have not acquired the minimum prerequisite qualifications for admission.

A student who has appeared at the intermediate or Bachelor of Arts examination and is waiting for announcement of his result can take summer course to earn advance credits If he passes the examination concerned as well as the summer course, if they are properly dove-tailed with semester courses would enable the abler students to earn a Bachelor's and Master's degrees simultaneously in less than the prescribed time.

Disadvantages

1 *Redevelopment of Courses*

First disadvantage is that it relates to recasting and reorienting the syllabi in such a manner that an inter-disciplinary well balanced and well coordinated system of teaching-learning emerges This task cannot be performed under the present constitution and function of our boards of studies and faculties It would need either development and redevelopment or editing of courses at meeting of groups and inter-disciplinary nature under the guidance of some experts in curriculum development.

2. *Inter-disciplinary Time-tables*

The second great difficulty which takes away one crucial advantage of the semester system is the framing of a flexible time-table cutting across the boundaries of a number of courses in different disciplines. The fram-

ing of inter-disciplinary time-tables is indeed time-consuming Its success depends upon cooperation among different inter-disciplinary departments and good relationship Frequent strikes and strife in one or more departments would affect the working in other departments

3 *The Staff-student Ratio*

More staff would be needed if a fairly good number of inter-disciplinary courses are offered If courses are made short and sharply focussed, it would again necessitate increase in the staff. The recruitment of additional staff and expansion in classroom facilities in a faculty or college would certainly be a point if more courses are to be instituted But the recruitment of the teachers and the need of more classroom should not be an insurmountable hurdle. The institution should examine the workload pattern of its teachers and make the assignment of teaching, practical work, guidance, etc. in such a way that wastage may be avoided and reasonably some more time of teachers can be economized which could be utilized for teaching new courses.

Now recruitment for courses that are new and for which competence is not available in the existing staff will have to be made. There is no escape from it. But it should be possible for the UGC to support such additional staff through its grant-in-aid for developmental programmes.

4. *Inter-university Mobility*

It is sometimes held that 120 institutions deemed to be universities and institutes of higher education in the country are working under a different system. The semester system and the new courses, however progressive, advantageous, purposeful or perfect that they might be, are likely to cause difficulties in respect of inter-university mobility The adjustment of evaluation procedures of a university which adopts such system with other centres of learning, which have not so far given it a place in their academic scheme, may not cause a little confusion and even headaches.

5. *Student Attendance*

In order that the semester system achieves its objectives of keeping the student community busy all round the year, it is necessary to lay down attendance requirements The current practices in many universities of laying down an over-all percentage of attendance, would need a change. It would be advisable to lay down attendance requirements in terms of hours for each course. The conference of the vice-chancellors of U.P. universities decided in 1968 that only those students who attended at least 75 per cent of minimum number of periods presented in each semester might be permitted to appear in the examination. For genuine reasons, relaxation in attendance up to a maximum of five per cent might be allowed with the approval of the vice-chancellor. If the argument is accepted that the insistence of 75 to 80 per cent of attendance on the part of the students in the best interest of maintaining standards of higher education the arrangement for keeping records of attendance on a fool-proof basis becomes a real problem.

6 *Internal Evaluation*

The semester system implies internal evaluation too It is often maintained that though internal evaluation is sound on paper, yet it does not work in practice, especially in affiliating universities, each having 50 or more colleagues attached to it There are quite a large number of educators including university teachers who do not favour and are not ready for the adoption of the cent per cent internal evaluation system.

The semester system and the system of internal assessment are concomitant no doubt, but are not a case of internal relationship It is possible to have a semester system and external examination as it is done in Meerut University The difficulty in regard to evaluation can be obviated by allowing these universities, and within a university those faculties or colleges which are not ready for all internal evaluation, to adopt a system of evaluation which is partially internal and partially external

7. *An Overload of Tests*

The semester system does not carry full or partial provision for internal evaluation of the sessional work by teachers themselves. When the number of courses are very many, the internal sessional tests become a continuous load on the minds of the students, and because of the tension created by tests, they cannot really enjoy their student life There is another difficulty too. As their internal tests are set by teachers in their regular periods, it happens in actual practice that many tests are set on one single day. At times, students are required to take four tests in a day, which is very much tiring for them When there are tests, the students are found absenting themselves from attending other periods on that day, as they read for the tests sheltering themselves in corriodors and under the trees of the college lawns.

Conclusion

The semester system may result in a distinct improvement of curricular organization and evaluation in vogue at present. Because of short and coherent subject-matter, the semester courses are likely to be more conveniently combined to facilitate inter disciplinary studies It would make it possible to coordinate studies between different departments at graduate and postgraduate levels.

Further, the system would enable teachers to cover the subject-matter in a more logical and non-repetitive manner It would allow students a choice of subjects according to their ability, aptitude, interests and needs which would help in reducing wastage One other significant advantage will be that it would allow the student to progress rapidly towards fulfilling the requirements of the degree. It would reduce the evils of a single final examination. It would pave a way for more frequent changes in courses aimed at their modernization and enrichment. Its greatest virtue will be flexibility, better curriculum, better focussed teaching and learning and a fairer and more just deal to students in examination And all of these would mean better curriculum, better learning, more student pre-occupation and less student unrest □

Attempts to Improve School Textbooks

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ATTEMPTS to improve textbooks at school stage in India have been perceptible during the last quarter of the nineteenth century in certain rigorous ways although even the beginning of this century saw some efforts in that direction. Educational activity entrusted to the East India Company by the Charter of 1813 was the publication of textbooks in Indian languages. Consequently, the Directors of East India Company had in 1814 ordered the publication of Sanskrit books A couple of years later, in 1817, the Calcutta Book Society was formed with the object of printing school textbooks either free of charge or at a very nominal price. The first Government Press was opened in 1924 which was primarily meant for the publication of books in Indian languages.

The Government of India felt the need of improving textbooks sometime in the later half of the nineteenth century. In 1873, local governments were requested to appoint committees for the examination of the then existing textbooks in order to bring them in line with the principles enunciated in the Resolution of 1873. Among the chief questions before the Hunter Commission (1882) was regarding textbooks as a condition of grants and recognition imposed by the government on schools.

The years 1900 to 1930 may be described as the three decades of improvnig textbooks selection procedures. Analysis, measurement, evaluation and standards of selection were the main targets of attention. In 1913, a Textbook Committee was constituted by the Government of Bihar. Prior to 1225, the selection and prescription of textbooks was generally the administrative function. In November 1925, Bihar started a regular system of selection of textbooks. Researches to improve textbooks selection were conducted.

The following two decades of 1930 to 1950 witnessed attempts to improve both academic and physical aspects to textbooks. During this period, attempts to improve typography and readability were made. The next couple of decades from 1950 to 1970

were mainly devoted to improving textbooks through nationalization.

Textbooks nationalization was undertaken by the states of Jammu and Kashmir (1948), West Bengal (1949), Bihar (1949), Orissa (1963), Andhra Pradesh (1963), Madhya Pradesh (1968), Maharashtra (1967), and Gujarat (1969). Importance of nationalized textbooks was highlighted The use of nationalized textbooks was advocated. The studies dwell on the importance of textbooks as tools for teaching and learning. Shortcomings of nationalized textbooks were identified. Improvement of nationalized textbooks was recommended by a number of studies The studies point out shortcomings of nationalized textbooks and give varied suggestion to improve them for the purposes

Improving textbooks preparation was undertaken during 1950's and 1960's The studies make case for improvement of textbooks planning, writers and materials. Improvement of textbooks production programmes was attempted to solve the problems of cost, jacket, cover page, etc. Publication aspects of school textbooks were also improved during these two decades. Improvement of textbooks distribution was attempted. The studies point out the directions in which textbooks production/distribution can be improved.

Improving textbook illustrations was undertaken during 1950's. The main emphasis was on the improvement of colour photography and interest appeal.

Attempts to improve textbooks in India and abroad may be inferred from attempts at textbooks surveys conducted in number of countries. The Japanese National Commission from Unesco, Tokyo, conducted a survey of school textbooks in Japan in 1954, and the American Textbook Publishing Industry in 1957. The National Council of Educational Research and Training (NCERT), New Delhi, conducted a survey of school textbooks in India in 1970.

Improving textbooks through evaluation was still another attempt in the same direction undertaken during the third quarter of the present century Textbooks improvement through evaluation criteria was undertaken. Improving textbooks through the use of evaluation instruments was attempted Subject textbooks were evaluated for improvement. According to the studies, textbooks can be improved through evaluation of pre-production and post-production stages.

Textbooks improvement through researches in both academic and physical aspects has been attempted According to the studies, researches help in the improvement of school textbooks. The Indian Ministry of Education set up the Central Bureau of Textbook Research in 1954 with the objective of improving school textbooks. A Textbook Workshop was organized at Srinagar in 1955 for the same purpose The CBTR brought out three research monographs in 1958, 1959 and 1963 on the subject.

The National Book Trust and the Children's Book Trust were set up by the Government of India, to publish books of national interest for school-going children and others. The NCERT, set up in 1961 by the Government of India, took up the production of model textbooks, tryout of books on an experimental basis, and the development of conceptual literature for textbook evaluation.

The Emotional Integration Committee (1961), the Indian Parliamentary and Scientific Committee (1964), Saiyidain Committee on School Textbooks (1966), the Education Commission (1966), the National Integration Council (1967), the National Policy on Education (1968), etc. were charged in quick succession to examine the problems of school textbooks with a view to improve them.

The Government of India set up the National Board of School Textbooks in 1969 for the purpose of improving the books. Due to this Board, the NCERT set up the Department of Textbooks and the National Centre of Textual Material Also, on its behest, the NCERT undertook a crash programme of evaluating school textbooks from the view-point of national integration. But alas! the Board, the Department, and the Centre were wound up in 1975, 1976, and 1977 successively, and even the crash programme for school textbooks evaluation was handed over to the respective states wherein it is still going on.

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The Influence of Sexist Bias on Female Role in Rural Areas

(Smt) K. Nischol

The fight for independence in India had, among other things, revealed the presence of untapped potential of the female world which comprised nearly half of the country's population. Subsequently, socio-economic developments provided an impetus to the women to improve upon their low status in the predominantly male-oriented society

Little was done prior to 1975 to give precision and objectivity to the causes of low status of women in India and thereby their poor contribution to national development. Specially true was this in respect of the rural women although they constituted the major portion of the female population

In 1975, when the first major attempt was made to assess the position of women in India[1] the disheartening fact came to light, namely, that the demographic trends were indicating "a process of change that is moving in a direction opposite to the goals of our society and its plan for development". As a consequence of the findings of the committee several organized research programmes were initiated which emphasized the need for the government intervention in the fields of women's education, health and employment

Despite the several meaningful action programmes having been taken in these directions, today one continues to find discriminatory attitudes towards women perpetuating their low status This phenomenon is more apparent in rural areas. None can deny the importance of providing skill training, literacy and nutritional/child-caring knowledge to this group of the population. However, day by day, it is becoming obvious that unless there is a change in the traditional, cultural and family script which conditions the women to accept their subordinate position and adult roles in society no sense is likely to be made of social legislation.

A recent study of the adult rural com-

[1] *Report of the committee on the status of women in India.*

munity's reaction towards sex roles was conducted in two villages each in Maharashtra, UP and Haryana The study aided by UNICEF and sponsored by SNDT Women's University, Bombay, among other things, revealed the existence of sexist bias[2] among parents. It would not be too radical to assert that these biases, overtly and covertly, were being transmitted to the coming generation and thereby perpetuating the existing status of women.

Accepting Charles Anderson's classification of roles in terms of "the normative role as specified by the general culture, the perceived role or the way in which the individual interprets general cultural definitions and expectations and the actual role performed by the individual role incumbents" the main focus of the research was on the study of the child-rearing practises prevalent among rural families. It would not be out of context to contend that the subtle and obvious behaviour manifested towards the boy-child and girl-child was invariably conditioning them both towards the roles they are expected to fulfil as adults.

While analysing the responses, due consideration was given to the fact that the rural community is dominated by caste differences and caste norms.

Findings

The analysis of the responses revealed the existence of sexist bias both in respect of cultural practices as well as attitudes of the community.

Celebration at Birth of Boy/Girl

Tradition and perhaps certain sociological factors are responsible for parental rejoicing at the birth of a son and dejection at the birth of a daughter in India. The data obtained revealed an overt equalitarian attitude among Maharashtrian parents on this occasion, whereas discriminatory attitude of parents in Haryana/West UP villages to an extent that over 50 per cent parents herein openly claimed to be celebrating in a comparatively subdued manner the birth of a girl-child

Age at Marriage

Although reformatory measures and progressive legislation have contributed towards greater acceptance of higher age of marriage for both boys and girls, yet, in reality, particularly amongst the lower castes of the rural population, there is still scepticism in this regard. Respondents of both regions were unanimous in their attitude against sons' marriage below 16 years. Whereas in Maharashtra only one-third of the respondents preferred to marry off their daughters before the age of 16 years (primarily in intermediary and lower castes) in Haryana/West U.P. regardless of caste over 50 per cent desired pre-puberty marriage.

Education

One of the significant indicators of an equalitarian attitude is desire for education of both sons and daughters. The responses received in respect of this indicator revealed that education for both children was desired. Hardly 3 per cent for daughters and 2 per cent for sons in Maharashtra while 4 per cent for daughters and 0.2 per cent for sons in Haryana/UP indicated non-desirability of education for the two sexes. (Evidently they desire to educate sons in more numbers among the communities residing in the north.)

[2]Discriminatory and arbitrary assignment of behaviour, personality trends and roles to the two sexes.

Although majority of parents in both geographical areas desired to educate both boys and girls, yet the level of educational attainment differed for the two sexes. In main, higher education was favoured more for the boys. In respect of girls, in Maharashtra over 50 per cent parents at all socio-economic levels indicated that daughters should pursue education to whatever level they desired. In UP and Haryana, except in the upper socio-economic class, the rest tended to favour restricted female education. The rationals for such an attitude was their limited finances, nonetheless the underlying factor was their scepticism with regard to the utility of education for girls The parents community, especially in the north, felt that higher education could be detrimental to the interest of the family. In their view, educated girls would be misfits in their traditional role of housewife and mother. The possibility, according to them, existed that the girls may flout societal norms and bring shame to the family. Afraid of the future generation of girls becoming 'modern' the rural parents preferred to perpetuate illiteracy or limited educated amongst the young daughters. In respect of boys, they seemed to have accepted the importance of education as a means for securing better employment

Employment

In our rural societies, though women have always participated in productive activities alongside with their menfolk, the cultural connotation of the word 'employment continues to imply "going outside' the home precincts to hold white collar jobs alongside with strangers" The responses of the parents community in the rural areas, therefore, needs to be viewed in this context.

Whereas both in Maharashtra and UP/Haryana, parents favoured gainful employment among boys as it enhances family status, hardly a handful of parents in UP/Haryana favour such activity for girls and that too in times of dire economic necessity after marriage. The Maharashtra rural group, however, perceives the employment of girls as a means of improving their personality/marriage prospects Besides, they revealed no hesitancy with regard to unmarried girls holding jobs.

The study revealed that regardless of the geographical area, parents in the rural areas had become conscious of the need for supplementing family income The hold of tradition being much stronger in the north, parents here were reticent to permit the female population to venture out in search of jobs. This feelings of "third party orientation" being relatively less in Maharashtra caused rural parents here to encourage daughter to seek gainful employment

Sex-typing of Activities

Traditionally in India, there has been sex-typing of activities—the male species' exclusive role being that of a bread-winner whilst women, very often performing the dual roles of a housewife and a helper in any productive activity in which the family is engaged The data obtained from the present survey indicates the persistence of an attitude whereby activities are typed by sex

There is a clear indication of compartmentalization of activities as famimne and masculine Other than teaching younger brothers and sisters (which is an activity not particularly favoured for both sexes) famimne tasks of household and childcare are excluded for boys" while "masculine tasks" involving physical labour and/or performing errands outside the home are excluded for girls especially in Haryana/West UP).

Decision-making

In patriarchal society, especially among the 'non-moderns' the authority figure is primarily the male members Whether it is a decision with regard to domestic issue and/ or social matters, female participation in decision-making is generally negligible

The present survey, however, revealed certain regional differences in this sphere. Apparently, the rural folk in Maharashtra appear to have moved away from traditional set-up while the village communities in Haryana/West UP seem to be still tradition-bound In Maharashtra, most decisions seemed to be jointly taken and the females in the household did get an opportunity to voice their views In Haryana/West U P. on the other hand, the women folk were not considered important enough to indicate their options at a point when a decision is to be made.

Conclusion

The present study of sex biases among rural communities in Maharashtra and Haryana/West U.P. has highlighted certain regional and caste difference in attitudes ·

1. Whereas traditional values are prevalent among rural folk in both areas, Haryana/West U.P regions appear to be more traditional and restrictive with regard to female roles.
2. Equal opportunity for education of boys and girls has high acceptance in both areas However, in respect of girls there is still scepticism regarding benefits accruing from higher education This is understandable in the context of massive educated unemployment and difficulty of finding matches for educated girls
3. As against rural parents in Haryana/ West UP their counterparts in Maharashtra indicate the necessity for girls to seek gainful employment outside home
4. Marriage of girls subsequent to attaining 16 years is preferred by more Maharashtrian rural parents as against those of UP/Haryana.
5. Parents in Haryana/West UP are not conscious of their discriminatory behaviour at the birth of boy/girl child. Often this phenomenon is rationalized in terms of paucity of funds or religious injunctions.
6. Caste variable operates differently in the two regions In Maharashtra, the upper castes are more liberal and have egalitarian values, while in Haryana/West UP except for liberal view on education among upper caste all the castes have restrictive attitudes
7. By sex, the men-folk appear to be more liberal in their attitude towards sex roles than the women-folk

Recognizing the influence of parental/ societal attitudes in the future roles of the younger generation, the present study reveals the necessity of taking imminent measures in weakening the rigid traditional concepts regarding 'masculinity' and 'feminity'. Although gradual imperceptible changes in attitudes are bound to occur as a consequence of greater interaction between urban and rural areas, nonetheless interjection of specific variables through media could hasten the pace of change especially when the 'pros' of the so-called 'modernity' are favourably balanced against the 'cons'. □

Religion and Education

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HISTORY tells us that once religion and education went hand in hand in India and no doubt there were problems too. But the problems pertaining to the same were perhaps never so acute as they are today As such the educationists of our country today are duty-bound to lay their heads together to find out their real solutions.

True, religion, morality and education being absolutely necessary to good government and the happiness of mankind, it is high time that educational authorities and educationists should consider all the problems pertaining to religion and education, though problems here are many and overwhelming. Of these the most persistent are: (*i*) Is the formation of good character a function of nature or a function of nurture or of both ? (*ii*) Can good character be formed by secular moral education alone or must it be supplemented by religious education as well ? (*iii*) Should the State be satisfied simply with imparting moral education and leave the responsibility for imparting religious education to somebody else ? These and such like questions have rightly been raised at present in India as elsewhere. For all will admit that no activity of schools and colleges is in a more deplorable and unsatisfactory condition than religious training although it is futile to make it responsible for the simple reason that it only reflects the confusion and chaos that are prevailing in our society today.

But there was a time in India when no such questions could arise. For education at that time in India was left in charge of priests. They were accepted as Gurus because of their moral and spiritual virtues while the administration of the country was entrusted to the monarchs. To these Gurus who lived in hermitages and the pupils who lived with them, the ideal of life was a normal progress, "from individual body to community, from community to universe and from universe to Infinity". These Gurus "keeping in mind the goal of this purpose did not in life's first stage prescribe merely the learning of books or things but Brahmacharya—the living in

discipline whereby both enjoyment and renunciation would come with equal ease to the strengthened character of their disciples" To these young hermits of ancient India who used to chant with their Gurus:

To the God who resides in fire
and water in trees and plants
Immanent in the World and the Universe
we bow, we bow

and learnt from their Acharya's blessings at the time of convocation *Satyam vada, Dharmam chara,* learnt *Yani Anabadyani Karmani tani Sevitavyani no itarani,* etc. ethical life, the practice of religion and learning were inseparable. To this may be added their unbroken contact with nature which was at once their library, laboratory, encyclopaedia, reference book and research institute. Thus while Brahmacharya used to safeguard the young disciple by disciplining him against the premature awakening of desire and its unhealthy gratification, he was never denied the opportunities "to see the sun unlock the day with bright fingers and the tranquil glow of evening merge into the star-studded darkness of night". As such religion and education used to go hand in hand

This state of things was quite in agreement with the prevalent ideas of society in ancient India and this system continued for a long time. Perhaps this was possible because of the existence of monarchical system of government throughout most of the periods of Indian history beginning from the early Vedic period. And though the Buddhist education did not recognize the Vedas and the Brahmanic hierarchy, as well as the religious aspect of the caste system and though for many years it held fast to a system of education which was a rival of the Brahmanic system, yet it incorporated many ideas from the latter to its own and they were in many ways similar to that.

Again, if we have a general survey of the Mohammedan rule in India, we see that religion in education was not neglected. In the Koran education is urged as a duty and the Mohammedan princes were instructed in their religion, besides other subjects in the interest of the nation which they might be called one day to govern. Here a portion of what Aurangzeb spoke to his old tutor Mulla Shah is worth quoting

> If you had inculcated lessons which elevate the Soul and fortify it against the assaults of fortune, tending to produce that enviable equanimity which is neither insolently elated by prosperity nor basely depressed by adversity, I should be more indebted to you than Alexander was to Aristotle and should consider it my duty to bestow a very different reward on you than Aristotle received from that prince.

Thus we see that despite the political vicissitudes in the ancient and medieval periods religion in education had remained unaffected and the problems relating to religion and education did not appear on the scene But it cannot be denied that gradually religion in education became more dogmatic and authoritarian in India, however laudable the attempts of the ancient priests, Bhikkhus and Moulavis may be. Hence the emphasis began to be given more on the memoriter than on understanding. And words and symbols began to exalt over concrete religious and moral experience. Meanwhile we came in direct contact with the Europe of the eighteenth century which is known to be the 'Age of Reason' through the educational system introduced by the English rulers in India The monolithic structure of Indian society was shattered then and Lord Willian Bentink, the then Governor General of India, too, declared, "The fundamental

principle of the British rule, the compact to which the government stands solemnly pledged is strict neutrality", although the Christian missionaries went on crying for the introduction of "the only true religion—Christianity" in India. Thus the direct contact with the 'Age of Reason' in Europe together with the ruler's policy of religious neutrality began to press itself more and more on the educated Indian minds with the result that a secular outlook on life born of science and political revolutions in Europe began to compete very successfully with the religious outlook of India. Since then two parallel currents in education began to flow. One of these is, as Macaulay once aptly described it "a class of persons Indian in blood and colour but English in taste, in opinion, in morals and in intellect". These men like Macaulay once did not hesitate to say that "a single shelf of a good European library was worth the whole native literature of India and Arabia". But curiously enough, these people also laid stress upon secular moral education for the formation of character although they tried to do without any reference to religious training in schools and colleges. The other current began to run the institutions on ancient lines and faith in Hindu culture. Henceforward a a clash began to go on between secular moral education and religious education And commissions after commissions despite their recognizing "the inadequacy of a purely secular education" on the one hand and "the importance of ethical and religious instruction" in schools and colleges on the other, were unable to suggest any definite measures for improvement". So the question that forced itself upon us was whether we should accept secular moral education or we should supplement it by religious training.

Here it is interesting to note that Europe which once favoured secular moral education and is still favouring it, and from which we formed the secular outlook to a great extent, has also raised this very question at the present moment Here a portion of the report of the Consultative Committee on Secondary Education in England in 1939 "when the whole world was engulfed in a tide of barbarism"—is worth quoting. It states

> There is a wide and genuine recognition of the value of religious instruction and the teaching of scripture in schools and that the time is favourable for a fresh consideration of the place that they should occupy in the education of the boys and girls of secondary schools age. No boy or girl can be counted as properly educated unless he or she has been made aware of the fact of existence of a religious interpretation of life.

As a matter of fact the introduction of religion in education in England and Europe had been demanded long before this report was published. That is why we hear an educator like Froebel say that a child is "to grow according to the laws of his own nature into unity with humanity and ultimately with God himself." This outlook derives its strength not only from the idealistic philosophy but also from pragmatism. Thus while describing the moral possibilities of the non-sectarian public schools, Dewey observes, "Our schools in bringing together those of different nationalities, languages, traditions and creeds. In assimilating them together upon the basis of what is common and public in endeavour and achievement are performing an infinitely significant religious work". Really speaking a good number of thoughtful people of Europe is of the opinion that education unless based on religion will never be able to cope with periodical lapses into barbarism and the maintenance of a high degree

of civilization will remain only a pious wish. As John S. Brubacher observes, "Moral and character education could not fully succeed so long as our schools neglected religious or spiritual values".

Now let us see what is going on in India. Here the report of the Secondary Education Commission (1952) is worth consideration. It states that :

> The whole purpose of education is not fulfilled unless certain definite moral principles are inculcated in the minds of the youth of the country The necessity for religious education has also been emphasized by some, while others are not in favour of religious instruction, in view of the diverse forms of religions practised in our country and the positive decision in the constitution that the State will be a secular State This does not imply that because the State is secular there is no place for religion in the State All that is understood is that the State as such should not undertake to uphold actively, assist or in any way set its seal of approval on any particular religion.

Thus we understand that religion in education is a demand of the day in India as elsewhere. Now the question is . How can we establish religion as the background of the life of the school or to put it differently, what means are open to us if we try to inculcate it in the minds of those whom it is our duty as educators to guide ? But before that let us be clear what we mean by religion. Here we can do no better than quote Tagore He says . The individual man must exist for Man the great, and must express him in disinterested works, in science and philosophy, in literature and arts, in service and worship. This is his religion which is working in the heart of all his religions in various names and forms Here we may consider Sir Percy Nunn's views too According to him there are two things in religion—one is religious spirit and the other is theology which is concerned with the objects that evoke the former. To be more clear by religious spirit he means to say, "that there are objects of supreme and universal worth which rightly claim our reverence and service together with a sense that though in our weakness and unworthiness we must ever be their unprofitable servants yet to deny their claims or to fail in loyalty to them is shameful and dishonouring Thus a man may reveal the religious spirit in devotion to truth or to art or in the loving service of his fellows". In a word when devotion to anything that is ennobling and elevating is felt "as a Divine charge" we have an instance of what is called the religious spirit

This being accepted, we may go forward to put forth our views as to how to establish that religious spirit in the minds of our students No doubt it would be an audacity to offer here final suggestions but at the same time we would be failing in our duty if we do not do something at least for free discussion and further clarification in the hope that in near future it will bear fruit.

We believe that in inculcating religious spirit we will do well to fall in line with our ancient ideals that are to be modified in accordance with the needs of the present day. And as such we shall attach more importance to the atmosphere and to the preceptor than to the institutional set-up. Here Tagore's view is worth consideration. He says : My view is that we should follow the ancient Indian principles of education, students and teachers should live together and in natural surroundings and the students should complete their education by practising Brahmacharya. In short what we want is the form of Tapovana where "an atmosphere of purity but not of Puritanism, of the simple life but not the life of self-morti-

fication" reigns supreme So the model school in which we want to combine religion and education should be situated in an Ashram, which is far from the maddening crowd. Nor is this all. Keeping company with him we may say that all that is inessential should be dispensed with Religion and education have always avoided the superflous. But unfortunately this Brahmacharya has been displaced by the unattractive moral instruction and according to Tagore this sort of moral instruction is an "utter waste of time and effort, it is as futile as it is disagreeable" and he says, "I cannot think of anything that does more harm to society". Parroting a few copy-book maxims at some specified hours at school, simply "breed an awful lot of pretension and presumption" On the other hand a student who practises Brahmachaiya "far from regarding religion as something alien, takes to it easily and naturally as to a friend". Thus he wants to inculcate both religion and moral spirit in the minds of the youth "easily and naturally". This being accepted, we shall have to find out other resources And we believe that one of the most important resources is the teacher or guru himself for the child's attitudes are shaped in the main "by sympathetic contagion and by suggestion from admired personalities". So only those men and women who are dedicated to their vocation and believe and practise religion themselves should be attracted to this noble teaching profession We know that they cannot be made overnight nor do they grow out of the vacuum And here the residential training colleges may play an important part. As a matter of fact if we want our schools to be the nurseries of religious and moral spirit, residential training colleges should first of all make them the nurseries of teachers that we need most today. These teachers "will liven the whole lump of national education". Together with this, religious literature may be resorted to This means that we should not allow our reverence to set the Ramayana and the Mahabharata apart as religious books by themselves. Rather they should be removed from their unnatural isolation and be placed in schools. Similar will be the case with the Bible and other sacred literature. In order to do this we have to get a textbook prepared comprising all the great religions of India. In this textbook all the best of all the great religions of India and of the world as well shall be presented without casting aspersions on any religion.

It reminds us that the Education Commission of 1882 recommended "that an attempt be made to prepare a moral textbook based upon the principles of natural religion, such as may be taught in all government and non-government colleges. But after reviewing the report the India government that stated "It is doubtful whether such a moral textbook could be introduced without raising a variety of burning questions and strongly as it may be urged that a purely secular education is imperfect, it does not appear probable that a textbook of morality sufficiently vague and colourless, to be accepted by Christians, Mohammedans and Hindus would do much, especially in the stage of collegiate education, to remedy the defects or supply the shortcomings of such an education". It may be pointed out here that a similar attempt from the government level, too, was made in Bengal in the second quarter of the present century for the primary stage And textbooks of morality were also prepared. But somehow or other it did not succeed in the long run. Be that as it may, it may be said now that all are more or less conscious about religious instruction in education.

Next resource is the school assembly for prayer at the beginning and end of the day It will much help the day's work begin and

end in right spirit provided they are conducted in right spirit by the right man But much more important is the corporate life of the school where the relationships between master-pupil, pupil-pupil and teachers-teachers may bring religion down from the clouds of abstraction to the earth of values. At Visva-Bharati which is an example of the corporate life, this resource is fully utilized. Thus the corporate life here has been extended from the Ashram to the adjacent localities even As Dr. S. N Mukherjee has rightly observed: "The Visva-Bharati lays a special emphasis on the social side of pupils The care of the weak, the maimed, the indigent and the backward is an example of the humanitarian work of the institution. It also keeps in touch with the poverty-stricken masses of the neighbourhood." Thus through socialization they realize what religion is. It may be noted here that in the Aurobindo International University Centre there is no religious teaching as such. For the aim of the Ashram "is to help the student towards an all-round development of mind, life and body as instruments of the psychic or the Divine reality within him, to help him develop his whole being around this true central self and look upon himself as an integral part of the universe which is a multiple expression of the same One Reality as is within him" Thus what is taught there is, as the Rigveda says, "The Real is one, sages call it by various names". The same view is held by Mahatmaji Being asked about the place of religious instruction in the Wardha Scheme in 1938, Gandhiji answered : "We have left out the teaching of religions from the Wardha Scheme of education because we are afraid that religions as they are taught and practised today lead to conflict rather than unity". But "The fundamental principles of ethics, common to all religions should certainly be taught to the children and should be regarded as adequate religious instruction so far as the schools under the Wardha Scheme are concerned." This, we think, should be the ideal of all the institutions and we believe this is being translated into action in some form or other in the Gurukulas, Vidyapithas, Jamia Millia Islamia, Vivekananda institutions under the auspices of Ramkrishna Mission, Hindusthani Talimi Sangha so far as the religious instruction is concerned

Here it is interesting to note how George Albert Coe kept company with Froebel, Parker and Dewey in making the central feature of religious education the growing experience of the child in a social institution. He recommends that:

> Religious instruction should be emptied of its traditional meaning of telling the child what to believe Instead, it should be a matter of encouraging the child to develop his own religious experience by participating in a social situation where the people were at grips with problems the solution of which was bound to reveal religious values Religious values are to be realized not by the frontal assault of direct assignment, but by the flank attack of learning them incidentally in a social situation.

Again simple and sincere rituals should have a larger place in the education of the young, not believing that the religious spirit has drawn its strength exclusively from the ancient sources, but believing that it can be used as a means of intensifying and purifying social emotions. What is all the more necessary is that the rituals, be they concerned with athletic festivals or season-worships or be they associated with great events or great men, should not be shown but be so crystallized and refined as to suit all the citizens of the school society. It

should make provisions both for the talented and for the ungifted. As in the liturgies of religious societies, song, speech and many other things are combined so also in the festivals and celebrations of the school society we want to have them all combined. Here we want to give a special emphasis on music. And we will do well to remember that by assigning a special place in the curriculum to music Aristotle rightly hoped, according to his famous theory of Catharsis, to purge people of vicious feelings and strengthen them in virtuous ones. Similarly, Vedgana was once in vogue in ancient India and that tradition has been rejuvenated by Tagore in his Visva-Bharati where music in the daily routine of the school and university education plays a very important part Even a casual passer-by cannot but be steeped in religious spirit when songs during the Mandir on Wednesdays or on daily Vaitaliks reach his ears. Moreover, provisions for the teaching of painting, sculpture and dancing lead the students to all that is elevating and ennobling. Thus viewed they unconsciously take to religion in the true sense of the term.

Now a days internationalism is the order of the day. But we can never be international without being national nor can we be truely national without being international. If such be the case then together with all that we have mentioned, the study of the religions in this land shall be a compulsory subject—let us suggest—both at school and university level. Let us go so far as to say that our universities should not confer degrees or diplomas if anyone be ignorant of the great religions of India In this way, if they can make their students hold fast to their own religion, they may hope to make them also learn to love other's religions spontaneously. We do not know what a better fruit of education can be expected than this, if our students learn religious tolerance and universalism. May that day of glory soon dawn upon India when the Indian youth will blossom as the fairest flower and ultimately ripen into the life invigorating fruit. □

Open Book Examination System

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THE existing examination system suffers from several defects which have had an adverse effect on the educational process as a whole The present system mainly demands recall and/or reproduction of memorized information relevant to the questions but it does not test adequately the abilities of pupils to understand what they have studied, to apply the knowledge they have gained and to solve problems posed by situations in daily life The open book examination system would seek to rectify this bias by reducing the role of memory in the examinations It would concentrate on the testing of higher cognitive levels of understanding and application It is also one of remedies suggested to prevent or reduce malpractices during the examinations. It is becoming more and more difficult to control malpractices on account of growing number of examinees. Moreover, this system will encourage reading habits, reference to suitable books and periodicals to shift out the relevant information and assimilate the useful contents

The Concept

Students shall be allowed to consult textbooks and/or other reference materials to answer questions set by educational institutions/examining agencies/universities within the prescribed time

Objectives

The objectives of this examination system may be visualized as follows :

1. To reduce considerably, if not remove altogether, the emphasis laid on memory in the existing system
2. To make the examination more comprehensive in nature by providing for testing of higher cognitive abilities.
3. To inculcate regular study habits among students
4. To upgrade the teaching-learning process by shifting the emphasis from mere transmission of information to the development of abilities

that would help the student in his later life

5. To remove the 'fear psychosis' among students and help them to develop positive attitude towards examinations.
6 To rid the examination system of several stresses and strains that afflict it at present.

Testable Abilities

It is expected that the following abilities and skills will be acquired by students if introduced .

1. Competency to consult reference books
2 Development of self-study habits.
3. Development of abilities of the examinees to marshall the data, cull out information from different sources and apply knowledge to solve different problems
4 Development of habits to spend more and more time in libraries and meditate on what they have read to encourage creative thinking.
5 Development of the capacity to present irrelevant materials in a logical sequence

Advantages over Traditional System

The following advantages are visualized if this system is undertaken for implementation

1 Papers can be set in traditional form of questions also such as essay and objective types.
2. The examinee is free from pre-examination tensions which normally retards the efficieney of responses to questions.
3. Copying and other associated malpractices would become unnecessary
4. Bazar notes become irrelevant and as a consequence the racket in guide-writing and publishing would become unprofitable
5. The emphasis is shifted from memorizing to the reviewing of the material and as such more well directed and varied efforts become necessary to meet the examination challenges which is not possible in the traditional closed book examination system.

Limitations

The following may be some of the limitations of this system

1. The reduction of malpractices will not be achieved because of the possibility of consultations among students in the examination halls will be made easier.
2. The development of self-study habits will not be attained by this system. Rather the candidates will not have any incentive to study before the examination because of the fact that they will have access to reference books in the examination halls
3. It is difficult to enlist all of the abilities of students which are to be tested. There is also problem to train paper-setters who may set challenging question papers for this examination. As this examination requires a lot of expertise with imagination to set a good question papers, it will be difficult to tackle this problem.
4. There is also possibility that this system would encourage material printing in the form of catechism.

Implications for Implementation

It would be desirable to undertake a feasibility study in our situations to study some of the following aspects to implement this system of examination

1. Variations necessary in the introduction of the system in each subject
2. The modality of fixing the pattern of essay and objective type questions depending on the nature and scope of each subject
3. The method of drawing up a list of reference books in each subject and the code governing the supply of books and other materials at each examination in each subject.
4. The possibility of introducing multiplicity of question papers in the same subject at the same examination so that each group of examinees would answer different question papers.
5. Standardization of evaluation among various examiners.

The major factor that will contribute to the stability of the system is the question papers. Setting a question paper in the system is a specialized task Questions should be carefully worded so as to provoke clear response from the examinees in order to stimulate the examinee's capacity to understand, organize, apply and exercise knowledge rather to recognize the relevant answer in the textbook and copy them in the examination halls. Moreover, it is suggested that it may be taken up on an experimental basis in selected subjects/courses to study its implementation.

It is felt that there is a need to give trial to the system to reduce growing malpractices. However, the following issues need due consideration and wider comments from different agencies and persons:

1. Placement of the system in the external and/or internal system of evaluation. Questions to be answered whether it is to be used to supplement the existing system in order to remove the weaknesses or it is to replace the existing pattern of evaluation.
2. Weightages to be assigned to this system in the internal and/or external examinations
3. Weightages to its inputs in evaluation such as style of language, presentation of the subject-matter, insight over subject-matter and type of reference material to be used, etc.
4. Paper setting and type of questions to be set, value points and marking scheme to be developed to achieve objectivity
5. Training for paper-setters and examiners and skills to be developed amongst them
6. School stage for which it is to be used

Some Suggestions

A beginning is to be made to satisfy the growing demand. The following points need to be included in the action plan to obtain feedback and to clarify the confusion among academic circles in the country

1. Encouragement to some schools which may try this system on experimental basis to provide feedback.
2. Production of literature to be circulated among agencies at state and national levels.
3. Since paper-setting in this system will be based on traditional knowledge approach in the philosophical sense, higher objectives on Bloom taxonomy and creativity approach to evaluate divergent and convergent thinking, there is a need to

develop working papers for exposing three approaches and their implications for paper setting in the system which may be circulated to generate balanced thinking.

4 Developing good questions in the different subjects which may be circulated on a wider scale for use in schools.

5. Developing guidelines for the use of schools explaining its various aspects and precautions to be taken to safeguard the innovation.

Although much is being talked about the introduction of open book examination system in the country, there is a less clarity about its structural and operational aspects. There is a need to discuss following focal points to stimulate thinking as well as to throw light on some of these points.

1. An analytical study of contributory factors motivating to introduce open book examination system
2. Placement of open book examination system in the external and/or internal system of evaluation.
3 School stage for which open book system may be introduced.
4. Training for paper-setters and examiners and skills to be developed amongst them.
5 Type of questions to be set under open book examination system. Illustrations may be provided
6. Weightage to its inputs in marking answer scripts such as style of language, presentation of the subject-matter, insight over subject-matter and type of reference material to be used.
7 Weightages to open book system in internal and/or external examinations.
8 Basis on which paper setting may be done (implications in terms of objectives)
   a Knowledge approach (philosophical sense)
   b. Higher objective of Bloom taxonomy
   c Creativity approach.
9 Spectrum of abilities and skills to be tested under open book system which are not possible under closed-book system
10. If introduced, financial implications of open book examination system.
11. Administrative problems to be confronted if introduced
12 Essential requirements in the introduction of open books examination system
13. Advantages of open book system compared to traditional system
14. Open book examination system will boost material printing in the form of catechism
15. Needed academic and administrative inputs for proper try-out of this system. □

Passivization : To Teach or Not to Teach?

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"PROBABLY no other grammatical phenomenon has come under so much fire from grammarians and teachers of composition alike on the page and at the podium. The passive transformation is variously accused of being stilted and stuffy, weak and indirect, cold, impersonal, pompous, limp, shrinkihg, and evasive"[1]

Passivization is not merely a problem related to stylistics, it is an equally baffling teaching item for the teacher. A good number of such problems were discussed in "A mango was eaten by nobody"[2] The complaint regarding exercise in Allen's 'living English structures', however, was found to be insignificant due to a misunderstanding of the instructions accompanying the exercise. There are a number of occasions when the learner finds it difficult to decide whether an expression is passive or not (even teachers are misled)

> Our friend here a moment ago gave the example 'He was angry'. Angry is not passive but in pattern practices, it is connected in the same way 'The door is shut', shut is not passive but it patterns the same way.[3]

Teacher themselves may not be aware of the unusual behaviour of certain verbs. "Linking verbs do not allow passive transformation, for example :

John is a fool = * A fool is become by John.

*The author is grateful to Dr. D.S Tatke, Reader, School of Studies in English, Vikram University, Ujjain for his comments and suggestions.

[1]Virginia Tufte *Grammar as style*. Holt, Rinehart and Winston, New York, p 190, 1971

[2]A.G. Khan *Language forum* Bahri Publications Pvt Ltd., New Delhi

[3]P.B. Pandit (Ed.) Linguistics and English language teaching. Proceedings of a seminar held at the Centre of Advanced Study, Deccan College, Poona, 1965

John resembles a horse = * A horse is resembled by John

In addition to linking verbs there are a number of stative verbs that do not permit a passive, for example, cost, have, measure and weigh.

The book cost $5 95 = * $5.95 was cost by the book
He has a book = * A book was had by him.
The room measures 12 by 14 = * 12 by 14 is measured by the room
I weight 175 pounds = * 175 pounds is weighed by me.[4]

Reflexive pronouns defy passivization when the 'doer' and the 'sufferer' refer to the same person But what will be the passive of 'They kissed each other' ?

Progressive poses no problem in such transformation. Trouble arises when progressive is accompanied with some other element, e g. perfect continuous A good number of books on grammar are either silent or are avoiding an answer A traditional school grammar tells us that 'perfect continuous' cannot be passivized.[5] But even this restriction cannot be taken to be correct in all cases. This restriction was about the conjugation of verb 'love', which has a peculiar behaviour of its own. Does it remain in force in case of other verbs also ? The same book at other place gives us this construction :

Passive Perfect having been loved[6]
We are warned ·
Active (Perf cont) : to have been loving
"when passive the infinite has a present and a perfect form."[7]

Let us turn to the transformational grammar ·

John has been breaking the glass = The glass has been being broken by John (?).
John may be breaking the glass = The glass may be being broken by John (?)
John may have been breaking the glass = The glass may have been being broken by John (?).

The last three passives may not be fully grammatical for all people. Many people avoid using the passive when auxiliary contains the progressive plus another optional element.[8] T rules tell us of another restriction, i.e. the position of agent in relation to adverbial : It (agent) must be placed after the adverbial If we place it immediately after the main verb the result, while perhaps not completely ungrammatical, is quite unnatural sounding.

? " The broom was stood by John in the corner
? * The broom was thrown by John into the corner."[9]

We are warned that "the noun phrase following the preposition cannot be used as

[4]Mark Lester *Introductory transformational grammar of English* Holt, Rinehart and Winston, New York, 2nd edn., 140, 1976
[5]Wren and Martin. *High school grammar and composition.* S. Chand and Co. Ltd., New Delhi, 104, 1978
[6]Ibid., p. 129
[7]Ibid., p. 124
[8]Mark Lester, ibid., p. 141
[9]Ibid., p. 149

a new subject in a passive sentence, for example .

> They informed him of the outcome
> He was informed of the outcome
> *The outcome was informed him of by them."[10]

Having armed ourselves with these rules let us try to transform certain active sentences. Sentences which follow are all given as a part of transformation exercises in *Exercises in English composition*[11]

My experience with my students is both rewarding as well as causing frustration. It makes it quite clear that the learner must be warned beforehand : "Don't attempt them by mechanical shifting of S and object Use your brains". "A great part of their character is derived from their parents." The subject (children) is understood But many students did not comprehend the implied subject. The result was disastrous .

> *Their parents derive a great part of their character from their children (or by their children).

Embedded structures perplex the students. They attempt such sentences partially (being mathematicians they know 'integration by parts; hence transformation by parts is a result of habit)

"New thoughts are needed if the world is to be brought from its present state" was put as active : "We need new thoughts if the world is to be brought from its present state". But the second part was left intentionally. The learner looks in vain for a verb in the second part He has to supply a verb *wish* or *want* and then only he can write. "We need new thoughts if we *wish* (or *want*) to bring the world from its present. Statement : Of course, it is possible to write 'we need new thoughts to bring...present state.' But in that case we have to conveniently forget the 'condition', i.e. "*if* the world is to be brought."

"In the sweet of the brow is the body to eat its bread " The learner automatically treats the expression preceding 'is' as subject. Then, he looks for the object He gives up. Inability to recognize subject, object is equally evident in the following sentence : "Her admirer deems it time to draw back." *What* can never be suspected to be a subject. They are groping in dark in "*What* impedes this attainment " I got *what* is impeded by this attainment.

The tendency to retain the preposition is rare. If at all placed, it is at the wrong place. Problem becomes complicated if there is already a 'by'.

"The world in which we live is allowed to pass unheeded by," is transformed. "We allow the world to pass unheeded;" 'by' is left out They are a hunt for missing subject following 'by'.

Inadequate ideas	has been thought	adequate by
O	V+ppi +perf	oc

everyone
S

is to be transformed as :

Everyone	has thought	inadequate ideas (to be)
S	V	O

adequate
oc

But when the learner is shaky in confidence he analyses it as follows :

Inadequate	ideas	has been thought	adequate by
oc_2,	O		oc_1

everyone ,
S

and he writes. Everyone has thought adequate ideas inadequate.

"Many men in our dangerous age seem to love misery and death" seems to be an easy sentence but its transformation is not easy to arrive at.

[10] Ibid., p. 151

[11] *Exercises in English composition*, Compiled by English Department, Lucknow University, OUP

*"Misery and death seemed to love by everyone". "Misery and death" continue to appear subject of verb 'seem' even after passivization. What other possibilities are expected ?

*Misery and death are seemed to be loved.
*Misery and death are seemed to love ...

The long awaited answer "Misery and death seemed to be loved by..." is rare to arrive at.

"Here we reach the link between philosophy and religion" poses a problem which is due to a misunderstanding of expression 'here by'

"The link between philosophy and religion is reached here (by us)." The sentence is all right without 'by us'. But we are likely to be surprised by :

*The link between philosophy and religion is reached here by.

Or

*The link between philosophy and religion is reached hereby by us

Sometimes an over-enthusiastic student tries to transform that part which is, in fact, not to be transformed at all

"I have ever gained the most profit from the books which have made me think the most."
(*a*) "The most profit (that) has ever been gained by me is from the books"
(*b*) "I have been made to think the most by the books"

Can we do simple addition of (*a*) and (*b*) ? or should it read ·

"The most profit that has ever been gained by me *is* from the books which have made me think the most ?"

Some people complain, "I have sometimes heard teachers insisting on the passive infinitive when colloquial usage prefers the shorter form :

There is no time to lose *There is no time to be lost.
It is time to close the shop *It is time for the shop to be closed.

If we do not insist on this passive infinitive we will get "misery and death seemed to love", which, in fact, should be 'seemed *to be loved*'

Impersonal, objective description requires the use of passivization Scientists are expected to communicate their results in an impersonal, objective, unemotional language. A mastery of this transformation is commendable. But is the game worth the candle? How much of extra efforts and precautions are needed is evident from this article. A language teacher in a technical institution has hardly the time to go into greater details. Students would also resist such a heavy dose of grammer. What is your choice ? Should we leave them to their fate ? Should we remain content with mere introductory type of exercises ? Excellence is desirable, indeed. But is the approach pragmatic ? Today Asimov's may be a cry in the wilderness, but no wonder, there may be a revolt against the tyrrany of the grammar or unnecessary humility.

"The (scientist) describes exactly what he has found, interlarding every statement with a semi-withdrawal in the shape of qualifying phrase, and then translating the whole into a grammatical construction peculiar to the scientific paper—the impersonal passive."[12] □

[12]Issac Asimov. *From earth to heaven* (p. vii), quoted by Virginia Tufte *Grammar as style*, p. 198

Special Education in Japan

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JAPAN is one of the most developed countries of the world, both industrially as well as educationally. Under article 26 of its constitution, promulgated in 1946, all people have the right to undergo equal education according to their ability as provided by law. Based upon this constitutional provision, the Fundamental Law of Education was enacted in 1947. Basic aim of education, according to this law, is to fully develop personality of the people who would "love truth and justice, esteem individual value, respect labour, be awakened by a sense of responsibility and be imbued with an independent spirit." Under the fundamental law of education, people have equal opportunity of access to all types of education, spanning over a period of 18 years. This system of education is classified as consisting of kindergartens (3 years), elementary schools (6 years), lower (3 years) and upper (3 years) secondary schools, higher education consisting of junior colleges (2 years) and postgraduate courses (4 years). The authority to establish educational institutions, under the School Education Law, rests with the national government, local government (prefectures and municipalities) and private 'educational foundations' established under law. Accordingly the schools established by the national government are called 'national schools', those established by local governments the 'public schools' and those established by educational foundations as 'private schools'. While school education, including special education, is mainly under the control of public bodies, higher education is managed by private bodies, mostly universities and other institutions of higher learning. These institutions, catering to the educational needs of 1 crore and 66 lakh children in 6-15 age-group, are spread over the length and breadth of Japan which has 47 prefectures, 600 cities, 200 towns and 3,200 villages

Special education schools are the educational institutions which aim at "providing

mentally/or physically handicapped children and pupils with the kind of education similar to the one given in kindergartens, elementary schools, lower secondary schools or upper secondary schools and imparting them the type of knowledge and skill necessary to make up for their handicaps. Japan is one of the few countries which has tried to reach educationally every child needing special education. In 1978, there were 1,75,000 children who needed one or the other type of special education, depending upon the nature of the handicap. Out of this nearly 1,03,226 were receiving education in the normal kindergarten, elementary and secondary schools. The remaining 71,774 (42,838 males, 28,936 females) children were studying in 685 special education schools for the blind, schools for the deaf and in schools meant for the crippled and health impaired. Out of these 71,774 children, 3,367 (5 per cent) were studying in schools established by the national agencies, 67,651 (95 per cent) in public body schools and the remaining 756 (1 per cent) in schools run by the private bodies. These schools are manned by 25,197 (13,564 males, 11,633 females) specially trained teachers who are supported by 11,799 administrative personnel Policies and programmes of special education are prepared by a Special Education Division of the Ministry of Education and implemented by the national and prefectural level agencies Japan is perhaps one of the few countries of the world which had thought to provide educational service to every handicapped child by 1979 in the form of compulsory primary, elementary and secondary education. Only 3,367 children (0 02 per cent)were not attending any school because of severe handicaps. The remaining 99.98 per cent attend one or the other type of special schools.

Having known the factual position of special education and overall system of education in Japan, let us next know as to how do the special education institutions organize their activities which will be understood better if we know the functioning of two national level institutions. One is the Kurihama School for Handicapped Children (KSHC) and the other is the National Institute of Special Education (NISE). Both these institutions are located at Yokasuba near Tokyo and are national level institutions as their names indicate. During my visit to Japan in 1980, I had the opportunity to study the programmes of these two institutions.

The Kurihama school for handicapped children provides educational treatment for severely and multiple-handicapped children and organizes its activities in collaboration with the NIES, the main object being to provide facilities to promote educational research. The school admits 54 children in all, 18 each to three of its divisions—kindergarten, lower elementary and upper primary. These children are in 3-12 age-group and are placed into six classes . visual impairment with mental retardation , aural impairment with mental retardation , visual and aural impairment with mental retardation ; severe mental retardation, severe physical disability ; and severe emotional disturbance. Soon after admission to the school, the staff (consisting of one principal, 28 teachers, four clerks, 11 house mothers, seven nurses and one nutritionist) carries out investigations in order to assess the handicapping condition of each child and develop appropriate educational programme which is implemented with the aid of suitable instructional material and equipment The school also takes steps to keep each child in good health and safety in residential life.

The educational services provided to the children centre around six curriculum areas including sensory perception, motor develop-

ment, socialization, communication, activities of daily living (ADL) and health. Main purpose of providing educational services to the children in these areas is to build up a communication between the children and school These children are only in the 0-3 age-group of educational level. Most of them are lacking in appropriate communication skills and possess poor or non-existent ADL skills such as eating, toileting, dressing, etc. As these skills cannot be properly developed in the traditional way these are intensively and individually taught to each child in the classroom lessons. His regular ADL habits are formed through dormitory life with adequate consideration for mother-centred family life in natural home. It is difficult to teach them by visual system such as language alphabets but easy to teach them by giving muscular training. Activization of the sensory system of these children is considered very important. The teacher develops a particular ADL skill by showing to the children certain symbols printed on cards. The child watches the sign given by the teacher and carries out his instruction. Each correct performance is reinforced properly by the teacher by affectionate stroking of children's heads or backs. The teacher arranges many individual activities for the children, depending upon their interest. For example, one boy liked to play with water Each time the water came he learnt to manipulate it. With one and half year of training by the teacher he learnt to use toilet.

There is one teacher for every three children. Meetings of the staff are held every month where every case is reviewed. Teachers established several hypotheses for effective treatment of the children and try these hypotheses failing which they set up new hypotheses. On the co-curricular side, athletic meets of the children are held where parents are also invited. Parents are overwhelmed to see their children participating in different activities. They sleep peacefully hoping that their wards make further and further progress.

The Kurihama school gets full research support from the National Institute of Special Education (NISE). The Institute has on its staff one Director General, 53 research workers, 36 clerical workers and eight medical specialists The NISE, established in 1971, organizes many programmes in the area of special education. It undertakes research projects, organizes child guidance clinics, arranges inservice training of teachers, disseminates research findings on special education to other institutes set up by the prefectures throughout the country The focus of research studies is on: developing integrated education system for the deaf, dumb and blind children so as to put them back in ordinary school classes, devising training and treatment methods for special handicaps; and developing curriculum and instructional methods for the mentally retarded. Experimental manufacturing of instructional methods, supported by the electronic industry of Japan, is also done at the institute.

The child guidance clinic of the NISE handles problems of children having visual, hearing, speech, mental, physical, health, emotional and multiple-handicaps 1,968 children were given individual guidance in one single year. Inservice training of teachers consists of long-term training course of two months' duration and short-term training course of three months' duration. About 300 teachers are provided training every year Use of computers is made at the institute to arrange, store and analyse information on special education which is utilized by other institutions Books and literature necesary to promote researches are also developed by the staff of the NISE.

A brief description of the structure and

function of special education of a developed Asian country has been given in the preceding paragraphs from which we can possibly learn some lessons. We need to create in our country a national level agency, like the NISE of Japan, which can effectively promote the cause of special education by coordinating the work of various government and voluntary agencies. Special education has to be considered as not an isolated activity but integral part of the whole system of education There is need to conduct a national survey of the disabled children so that a strategy may be evolved for developing suitable educational services for these children Modern trend in special education is not to isolate the handicapped in special schools but to bring them back, after some initial training, to the mainstream of education. As in Japan, every child after primary education should be brought back to a selected few normal schools where facilities for special education may be provided. The child should come back to the community and become a productive member rather than remain a liability on someone throughout his life □

Educational News

Evolution of the content of general education over the next two decades

[Given below are the excerpts from the Final Report of the International Symposium on the Evolution of the Content of General Education over the Next Two Decades, Unesco, Paris, 7-11 July 1980.]

A *Fundamental principles*

1. Nobody should be deprived of education; it should not be reserved for privileged groups, as in the past. Inequality of access to education is attributable to administrative decisions, curriculum content and the language of instruction.

2. Educational action for the benefit of children is a long-term investment, for they will not occupy positions of responsibility until 15 to 25 years have elapsed. The decisions that will shape the immediate future must be taken by the adults of today; in other words, we must make a special effort now about the education of young people and adults.

3. Vocational or hierarchical forms of discrimination are real obstacles to the attainment of life-long education for all.

4. Outside the confines of the school, many different forces exert in influence in modern societies Any reform in education must make use of those forces, especially the mass media, so as to integrate them harmoniously, and in cooperation with the school, into a rationally planned programme for education

5. The decade now beginning is a crucial one for the survival of the world's peoples. Education should make young people aware of the problems of development and the existence of imbalances in food distribution and also of the problems of population, energy resources and the environment. Educational curricula should, therefore, develop the pupils' ability to foresee new situations and not merely to adjust to those which they already know, while at the same time developing their tolerance and their ability of appreciate other cultures and beliefs.

B. *Priorities to be adopted in determining the content of general education: Science, technology and the environment*

6. If national socio-economic objectives are to be achieved, the role of science and technology in general education must be reviewed. Science teaching should be based

on fundamental concepts; science should be taught as an organic whole; emphasis should be placed on methods and on the practical applications of science; the basic sciences should be more directly linked with what takes place in everyday life, and in particular with the natural and technological environment.

7. Mathematics should be an important part of an all-round education, and should be taught both for its usefulness and for its intrinsic value

8. The study of statistics should begin as soon as the child is capable of understanding its rudiments, and should grow more complex as the pupil progresses The role of probability should be given greater emphasis, and this concept should be dealt with in a way that relates it to everyday life (games, weather forecasts, accidents, health risks, etc.).

9 The teaching of natural sciences should help pupils to understand more about the environment and greater prominence should be given to health problems.

C. *Priorities to be adopted in determining the content of general education Society, language, community and culture*

10 The use and study of the mother tongue of both pupils and teacher, should be given absolute priority, especially in the early days of schooling; but the teaching of the major international languages of communication should not be neglected.

11. Too often, the school knows nothing about the language of the media, in which words, sounds and images are interfused. The best way of training pupils in this new form of communication is to teach them to speak, read and write its language. It is, therefore, important that children and adults should be trained in the critical appreciation and the creative use of audio-visual language. The curricula should also include a grounding in communication theory, together with an introduction to the concept of information and to the techniques now used in this field.

12. Information is not knowledge. In view of the growing volume of information of all kinds and from all parts of the world, and its atomization, education should place emphasis on the development of conceptual codes of reference and codes of interpretation designed to facilitate the mastery and assimilation of information

13 Universal history, as taught hitherto, has been merely history presented from the European point of view. Curricula should be broadened to include a cultural and socio-economic history of the world, so that pupils can grasp both the diversity of cultures and the oneness of human experience, and also understand the historical process that has produced the problems of the present day. History textbooks should be revised accordingly.

14 Often, too, a general education is not well-balanced. Physical education and sport, on the one hand, and education in the arts on the other, are indispensable to each pupil's development, his interest in the world and his growing awareness of his cultural identity.

D. *Preparation for the world of work*

15. An effort should be made by all concerned to link the school with the world of work and, conversely, the world of work with the school. The educational opportunities afforded by the world of work, in regard to both technological skills and mental attitudes, should be used so that young people will be better prepared for a balanced

occupational career. Action to encourage new relations between education and work should be the outcome of participation in decision-making by all the parties concerned, and especially by pupils, workers and families. If action is taken in this way it could help to guide the pupils and facilitate their choice.

16 From the earliest years, the educational process should aim to transcend the dichotomy between manual work and intellectual activity, and above all to get rid of the prejudice against manual labour that still exists in the great majority of societies.

17. In order to enable both women and men to have a career, preparation for the sharing of household tasks should be introduced into the curricula and distinctions between the sexes in the matter of where manual work and home economics should be abolished

18 The introduction of productive work into general education calls for a reform of policies for the recruitment and training of educational staff (use of non-teachers as educators, contribution of workers to educational activities, and life-long education for all).

19. Lastly, fresh studies of experiments in the combination of productive work with schooling should be made with a view to assessment, and more accounts of them should be published.

E. *Values and aptitudes*

20. In order that an all-round education may help to prevent civil strife and war and to establish peace, harmony and social justice in the world community, teaching on justice, freedom and respect for fundamental rights, a sense of duty and responsibility, social balance—in short, everything that makes for the quality of life—should be provided as a value of the utmost importance, inseparable from the world view that should be developed in each pupil.

21 Honesty, the spirit of service, perseverance, humour, loyalty and integrity are other good qualities that an all-round education should obviously encourage in each pupil.

22. Young people must be trained to be attentive to the views of others and to accept differences, so that they may make an objective attempt to engage in a constructive and supportive dialogue in a spirit of mutual tolerance and respect.

23 The social sciences and literary studies should provide an opportunity to emphasize cultural identity and free expression of the personality in a context of collective solidarity.

F. *Learning*

24. Instead of having prefabricated syllabuses thrust upon them, the users (learners) should be associated in the preparation of the content of their studies, so that their needs and their points of view may be taken into consideration.

25 Development is tending to assimilate and simplify fundamental concepts Accordingly, the content of an all-round education should be organized with a view to the integration, simplification and mutual reinforcement of the various branches of knowledge.

26. With a view to making more rational use of educational resources, basic training objectives for schooling might be established, and the mass media (press, radio, television, etc.) might be used to supply extra information that the school cannot provide. To achieve this, the school must show young people how to analyse and use information and must develop their ability to work independently, with a view to life-long education.

27. Change is a natural part of progress The school should prepare young people to master it so as to overcome fear and to reduce the generation gap We need to work out a real pedagogy of change, and to explore the avenues of creativity, artistic creation, communication, productive work and technological innovation

28 Closer attention should be paid to pupils' participation in experimental and practical activities and in the use of audio-visual apparatus, and their ability to recognize and assess the value of the various materials should be developed.

29 The importance of knowledge that is open or sensitive to the context should be emphasized, and the ability to place information in its context should be developed.

30 The presentation of the facts, particularly in school textbooks, should include not only an account of what is known, but also information about what is as yet obscure or unproved, so that young people acquire an interest in contributing to the development of knowledge.

31. In order to develop techniques for exploring facts and situations actually found in the world and seeking out sources of information, and to foster the ability to select relevant information for the solution of problems and set out the known facts, perception of logical structures should be stimulated by teaching the concepts of logic and mathematics and the techniques of modelling, the manipulation of algorithms and natural or artificial languages Mathematical linguistics, for example, has taught us that there are 'grammars' in other branches of science.

32. The possibility of changing the systems used for assessing pupils' knowledge should be examined, with a view to integrating assessment of performance and assessment of effort.

G *Specific proposals*

33 At the national level, encouragement should be given to the establishment of centres to supply a new type of educational resources, including both general information materials and teaching materials, these would serve as a link between the sources of information and the users. In general encouragement should continue to be given to the establishment of regional centres for the exchange and joint production of audio-visual materials.

34. School textbooks should, as a rule, be shorter, easier to consult and cheaper. They should be written by multi-disciplinary teams, which should include specialists in each discipline, educators and communication specialists.

35. In certain fields, Unesco should consider the advisability of producing reference documents (manuals or audio-visual material) which might serve as models for the preparation of materials for the various countries' education systems

36. The initial and further training of teachers, together with their preparation for new roles, is still one of the most pressing tasks in every country. In particular, educational personnel should be shown how to evaluate and use the new media, they should be equipped to understand educational research and participate in it; and they should be given information about the methods and purposes of vocational guidance.

37. Unesco should support the development in Member States of research centres for curriculum reform, whose role would be to give advice on how educational content and teaching methods should be developed, to contribute to the elaboration of new teaching materials and to promote initial and further training centres for teachers and other educational personnel.

38. Unesco should support the research and development activities mentioned above and contribute to their internationalization by increasing the numbers of cooperative programmes and stepping up the circulation of information on such activities among specialized institutions. In particular, it should take the initiative in convening, at regular intervals, more broadly based interdisciplinary international conferences on future studies concerning educational content.

Teacher torturers

TEACHERS who cane children may be branded torturers by the United Nations, following a decision by its Human Rights Committee to extend the definition of torture to encompass "corporal punishmsnt, including excessive chastisement as an educational disciplinary measure." This news item was published in *The Hindustan Times* in its issue of 17 August 1982.

The 18-member committee has incorporated the new definition in its annual report The committee monitors human rights in all countries which have signed the international covenant on civil and political rights.

The report, which will go before the UN General Assembly later this year, states that the covenant "protects not only persons arrested or imprisoned, but also pupils and patients in educational and medical institution."

"It is also the duty of public authorities to ensure protection by the law against such treatment, even when committed by persons acting outside or without any official authority," the report continues

Best contributor's award for a RCE lecturer

SHRI N.N. Prahallada, Lecturer in Education, Regional College of Education, Mysore, won the UWA Best Contributor's Award in the year 1980 instituted by the United Writers' Association of Madras on the occasion of its sixth anniversary, for his thoughtful contributions and creative writings. Shri N.D. Tiwari, Union Minister for Planning and Labour, Government of India, New Delhi, gave away the award to Shri Prahallad at Madras on 19 July 1981. Recently he has been awarded United Writers' Association's Award for Excellence in Journalism for the year 1982. He is the only recipient to get that prestigious award □

Book Reviews

Multilingualism and Mother Tongue Education D.P. PATTANAYAK. Oxford University Press, New Delhi, 1981, Pp. 185 Price - Rs 80.00

THIS IS one of those books which is at once informal and very scholarly. Informal in the sense that it carries a long chapter titled "Taught mother language and vernacular tongue" by Ivan Illych and scholarly because nothing presented here is unsupported by facts or a valid ground. Illych does a marvellous job of exposing a few myths regarding the colonizers' policies about the native languages of the colonized. It is a mystery why Macaulay is held responsible for bringing in English into India and a myth created about the real reasons. The truth is that no colonizer likes or tolerates the language of the colonized. Ivan Illych illustrates this point beautifully. He cites Nebrija, a Spanish scholar, who said, "My Illustrious Queen ! Whenever I ponder over the tokens of the past that have been preserved in writing I am forced to the very same conclusion. Language has always been the consort of empire and forever shall remain its mate. Together they come into being, together they grow and flower, and together they decline". Ivan Illych's contribution has both added the punch and value to the theme under discussion. Nebrija's arguments have a good deal of relevance to our problem in India too. Therefore, sample this line of thinking : "He argues that the vernacular must be replaced by an *artificio* to increase the range and duration of the monarch's power, then, to cultivate the arts by decision of the court, and, to guard the established order against the threat prescribed by wanton reading and printing" (p. 21).

In India today we have 1,652 mother tongues and some 14 to 15 developed major languages. The major language speakers are well-distributed all over the country. The question in this regard plaguing the government and the people has been, which language would take on the mantle of English ? The fears, suspicions and the like suggest that Hindi may step in to replace English because according to Nebrija's definition the Hindi-speaking people wield the power and, therefore, their language shall prevail. One could easily reason out this against the background of opposition to Hindi in the South and the East.

People also want to know how to go about meeting the requirement of the mother tongue in the present conditions in India.

Pattanayak has a solution : "What is being argued here is a conscious bilingual bidirlectical transfer model of education for those whose home language is different from the school language" (p. 62). I believe if we want peace in this country we had better accept this model.

There are a few essays with whose content one may not like to agree. It does seem possible that Pattanayak did not read Illych's essays or else he would not declare Macaulay as the arch-enemy of India's native language or thought of even mentioning "library language". What is a library language ? needs both serious thinking and research. I have yet to come across an Indian who would like to consult a journal in English and wanted to regard this consultation as some kind of library consultation.

On the whole the present publication does merit serious consideration and study.

R.P. SINGH

Master Mathematics Series 0,1,2, Baby's Counting and My First Activity and Number Book. First edition. C P.S. CHAUHAN. Progressive Educational Publishers, 5A/8 Ansari Road, Daryaganj, New Delhi, 1980-81

THE five pieces in the book form are the outcomes of the educational efforts by the present author. Writing books on philosophical, sociological, psychological, economic, political, anthropological, legal, artistic, medical and technological topics for higher classes (levels) is rather a less difficult task whereas to write books or series for infant classes for young kids growing to educable age, is a challenging task. In case of preparing books for higher education the main work remains the collection of relevant matter from various sources and its re-arrangement into a well-knit sequence But preparation of any book for smaller children needs careful psychological understanding of their needs, aspiration, development, intelligence, maturation, creativity, etc. and only then one may dare to write further. Out of the cluster of various subjects, mathematics is the biggest terror to children if not taught with a pedagogically sound way. Mr Chauhan, a scholar of mathematics education, has really worked hard in producing these books having taken the latest theories of learning into account.

The first book 'Baby's Counting Book' of ten pages clarifies the concept of numerals from 1 to 10 with the help of figures of animals and birds. The book is totally based on the maxim of from 'known to unknown'. This book may broaden and clarify the 'apperceptive mass' of children. The second maxim which is fully incorporated in this book is "from concrete to abstract". The colourful sketches and figures of birds and beasts attract babies to learn mathematics. It is more useful for the babies of the age group of 3-5 years.

The second book of this series is 'My First Activity and Number Book'. This is an activity-oriented number book for developing reading and writing abilities. This book comprising of 26 pages, gives opportunity to the learner to understand the concepts of numbers 1, 2...10 with the help of the coloured figures of concrete things and to write the number fairly and finely. It is just a next step ahead to the earlier book 'Baby's Counting Book'. This is a sort of workbook based on the principle of 'learning by doing'

The 'Master Mathematics Series 0, 1 and 2' have been published out as yet. 'Master Mathematics Series 0' of 64 pages contains estimation of size, quantity, length, height, addition, substraction, number in tens, less than, greater than, our coins and word-

problems, etc. The selection of units exhibits the outstanding ability of the author in understanding the process of 'concept development' among children and especially of mathematics Usually we start mathematics with the exercise of 'cramming' then 'conceptualizing' but the author has founded the learning process on the maxim 'proceed from concrete to abstract' which is psychologically and pedagogically sound. The techniques and examples have been incorporated in such a natural setting that even laymen parents can also teach their children mathematics very successfully. The figures, examples, skills and processes have been shown very fairly and children can start mathematics learning with more interest than any subject. It is highly attractive and conceptualizing learning tool of mathematics. This is also a work-book.

The other book of this series is 'Master Mathematics Series 1'. A few chapters of this book are almost the same as given in 'Master Mathematics Series 0'. The special features of this book are three chapters vis-a-vis 'The Substraction Table', 'The Concept of Zero' and 'The Addition and Substraction of Zero'. The three chapters open the eyes of learners and create sufficient mathematical insights. The illustration of these chapters are highly appreciable. Overall, this book provides ample opportunity to the learners for recapitulation in the beginning chapters and for drill in addition and substraction processes in the last chapters. This book of 95 pages requires careful observations on the parts of teachers and intensive exercise on the parts of learners. No step should be skipped over, otherwise methodical approach of learning mathematical concept may hamper seriously. The generalizations made after sufficient examples facilitate the children learn inductivity The problems given in the end of such chapter bind the learners to think deductively. In this way 'inductive' and 'deductive' approaches have been incorporated throughout the book The learners shall definitely develop quick reasoning through these exercises

The third book 'Master Mathematics Series 2' is a bit more bulky in comparison to any of the above-mentioned books but it is essential also because the 'infants' changing into 'children' should be given tests of 'a bit higher difficulty value' and be trained for more exercises. This book starts with revision work and ends with the problems of length, weight, time and capacity.

Every chapter of this book has been written with novel ideas. Though mere words have been used the simplicity of the language makes it easily understandable The illustrations regarding 'place value of digits', 'multiplication facts', 'division facts' and 'relationship between basic facts', are the evidence of the author's involvement in the pursuit of mathematical knowledge and his mastery over the pedagogy of mathematics.

It will not be an exaggeration to say that no parallel books are there in the market to these books The probable reason behind this success is the author's equal interest in the mathematics and pedagogy of mathematics both. Generalizations have been made after sufficient re-learnt examples. To develop the skills of mathematics, problems have been placed in the end of every chapter The mathematical problems cited in the book are mostly from the closest environment of the children. Children can very easily recognize the objectives. After having recognized these objectives, the children can be geared to learn the concept following various steps. The author has analysed microscopically the difficulties of learning mathematical concepts and after careful pathological analyses of 'matho-phobia' he has suggested relevant mathematical treatments which really seem to be 'panacea'.

Thus, this book based on the approach of 'learning through environmental rapport' is of immense use to the beginner of mathematics The sketches, diagrams, illustrations, examples, generalizations, strategies and tricks employed to every problem show the calibre of the author and gratify the usability and relevance of the book

Besides all the above-mentioned specialities of the books of this series, one thing appears misfitting into the whole effort. The language used in the word problems for the grades 0, 1 and 2 is seemingly terse. The books may become more useful for the common children on large scale if translated in Hindi and other regional languages because until now only elite's wards can derive benefit from these books. The lucid style, colourful printing, beautiful get-up, richness and appropriateness of contents, pedagogical soundness and comparatively cheap cost, justify the two expert comments, one from Dr. D.P. Gupta, Professor and Head, Department of Mathematics, Moti Lal Nehru Regional Engineering College, Allahabad and the other from G.D. Sharma, Consultant, NCERT Thus the author's claims have been achieved in the books

The teachers, teacher-educators, guardians, experts of mathematics education and publishers must see the books of this series at least once.

HARIKESH SINGH

Educational Concepts of Guru Nanak in Sidh Goshti

T S. SODHI. Ludhiana, Mukand Publication, 1981, Pp.-87. Price Rs 25.00

EDUCATIONAL contribution of the Sikh Gurus is verily perceptible in various ways and as rightly stated in the preface of this book, 'if some of the gleanings from the Great Guru's Bani, being presented in the educational context, are incorporated in the framework of Indian education, many of the missing links can be joined to make it a continuous process of national reconstruction and international peace' This is certainly not a tall claim as Nanak and his successor Sikh Gurus not only conceived but also put into practice a well-devised and a profoundly thought-out scheme of things to bring out the true in man so as to evolve a true human society where everyone would learn to 'live entirely for others', where everyone would learn to treat 'service before self' as the radix of true education, and where everyone would learn to live at the level of 'logos' rather than at the level of sheer 'doxy' Therefore, to achieve the true end of education, a kind of straight road is variously reiterated by the Gurus via commendations like live pure amidst all the impurities of the world, live in the world like a lotus that lives immaculate even in dirty water, etc. The Gurus did not raise more slogans but aptly demonstrated them in practice through their life-style and education they professed and practised at their great centres of education and culture which excelled the great Academics of ancient Greece in their being 'peaks of educational excellence' in a number of ways.

The 'Siddh Goshti, is just one example how the Gurus visualized various problems of philosophy, life and education especially in the context of 'the vision of greatness' that makes man's conduct, character and way of life nearly transparent. It is in this particular direction that the whole philosophy of Nanak and his successor Sikh Gurus verily tends to move. 'Deeming it to be the *sine qua non* Nanak challenged the whole concept of contemporary education and advised the teacher, and through

him the whole galaxy of educational thinkers and philosophers, never to alienate education from its true purpose, that is, from helping man realize the true merit of his being 'man', the name of creation. So did other Gurus, and particularly the tenth who sought to examine the whole gamut of classical literature and life-view in order to make educational endeavour tangible to the true cause of education Viewed from this angle, the book under review rightly says .

> In the Sidh Goshti, the value formation, human uplift, moral code, respect for teacher, truthful living, high thinking and healthy socialization have been so well demonstrated that it seems to us as if this Bani were written with educational thought in the forefront The latest implications of education like education for women uplift, education for national and emotional integration, education for international understanding and education for citizenship along with democratic principle of discipline have been contained in Sidh Goshti in an impressive way. It seems as it contains a complete philosophy of education

Indeed, a complete philosophy of education of the Sikh Gurus centres round 'Vidya Vichari, taan parupkari' which is verily suggestive of learning to live entirely for others. A truly educated person in the Gurus' conception is one who is sincerely and always out to help emancipate others rather than his own self. This is obvious from what constitutes the personality of a true teacher in their view. Nanak, and for that matter, his successor Gurus discounted what is generally termed as 'Pandit-guru' who abides in the world like a scholarly pedant whose business is simply to show himself off for what he actually is not He suffers from a kind of 'Sin of Acedia' and falls short of what he is he wastes away his human life by being a mere preacher and, therefore, fails to emancipate himself as well as others. Likewise, the Gurus do not see an eye to eye with the 'Yogi-guru', the anti-thesis of the 'Pandit-guru', who may sometimes seek personal emancipation through Yogi practices and miraculous exercises. But bound by his self-limitation, rather than self-fulfilment, he retires to secluded forests, mountain caves, etc., condemns himself to a kind of escapism, even worse than death, and in a way either grows rusty pale in his cloister's shade or becomes irreparably haughty. He frustrates the very seed of perfection in him and although he can hold his breath in the tenth gate, he never frees himself from the warps and woofs of his mind and selfishness. At times, he falls prey to mystic miracles and becomes, in turn, not only intellectually but also spiritually conceit which, in fact, is discarded by the Gurus not in Sidh Goshti but also in all discussions with Yogis and Pirs, teachers and philosophers at many a place.

Therefore, what they approve most, in Sidh Goshti, as in the whole gamut of their educational philosophy, is the concept of the 'Sage-guru' who is always whole and awake to what makes the true education of man, in relation to the cosmic design of perfection; who is verily the high-priest and practitioner of divine wisdom in whatever he learns or teaches, in whatever he wills, feels and does; who makes his life an example rather than a mere precept; who lifts the whole populace of his pupils at least to his own level of perfection; and, in fine, who evolves the 'gurmukh' in one and all to augment the chances of leaving the world better than what one really found it to be, to create a world where the culture

of 'God' somehow speaks through the culture of 'man'. Indeed, he draws out the best in man which is 'God', evolves the divine consciousness in him and verily teaches him, through his own example, how to live in divine perfection in his very day-to-day life and conduct in the world He liberates man from his ethico-spiritual void and barrenness, as also from metaphysical blindness that shrouds various subjects of study including science, technology, etc. which simply yield 'chunch gyan' as the Gurus call it, a beak-level knowledge that fails man to see beyond the 'materialism' of the curriculum, techniques, methods, etc. What is, therefore, most pertinent in the educational philosophy of the Gurus is to make knowledge instrumental to the realization of the higher ends of life, leading ultimately to perfection of man in his divine perspective And this, indeed, makes the central thesis of the Gurus' educational philosophy so much so that it permeates the whole of the teaching and conduct, as also the whole framework of their 'Khand' theory that lays bare a scientific process towards the highest development of man while living right in the material and physical fabric of life. This is truly the undertone of the Gurus' works including the Sidha Goshti, and in turn, of their entire philosophy

It is in this particular frame that Nanak examined in Sidh Goshti as many vital issues of life, philosophy and education as would a profound thinker ever seek to visualize. Obviously, these range from the very ordinary matters of life to the very profoundest, befitting the genius of a versatile philosopher. It tends to elucidate, among others, questions like what constitutes the vital source of life and how it could be realized, what makes Truth the highest and the way of truthful living still higher, what is man and his true purpose and promise of life; what involves a true 'udasi', etc.

What is, therefore, of utmost consequence in the educational philosophy of Nanak is a kind of holistic understanding of life as such through the process of genuine education that must operate and guide man during the entire course of his life It is this search for true education that constitutes the hallmark, and, indeed, the very burden of the Gurus' educational philosophy In tune with this major premise, the the Sidh Goshti not only raises fundamental issues of human life and education but also seeks to re integrate man to his primal position and status.

It is some of these questions that ought to have been explored and explained thread bare in order to make the book credit worthy in relation to the meaningfulness and educational significance of the Sidh Goshti rather than suggesting just a few obvious educational concepts in the way of a layman. For instance, Chapter 1, titled 'Guru Nanak and Sidhs' is simply a compilation of a few surface-level observations on Yoga, how it suffered at the hands of contemporary Yogis and a brief summary of the Sidh-Goshti. Likewise, Chapter 2, titled 'The Basis of Guru Nanak's Philosophy' describes briefly concepts like Sahaj, Dharma, Bhakti, Houmai, Sidhi, Seva, etc and how Nanak's concept of Yoga is distinct from Yoga of holding breath in the tenth gate via certain esoteric exercises In the same vein, Chapter 3, titled 'The Philosophy of Guru Nanak' reviews in passing and in vain a few of the Greek, German and indian idealistic schools of philosophy more or less in a sectarian way to show that Nanak's philosophy is primarily idealistic, though with its feet glued to a householder's life, fully awake to its social, moral and spiritual responsibilities in the world unlike the Hathyogis who lived in utter seclusion in the forests and caves to attain the ideal of God-realization for their individual selves rather than serving any

useful social purpose That being so, Chapter 4, titled 'Educational Implications of the Sidh Goshti' Seeks to analyse the Sidh-Goshti in terms of (*a*) aims of education, (*b*) curriculum, (*c*) teaching method, (*d*) the state of teacher, (*e*) education and national integration, (*f*) education for international understanding, (*g*) education and women, (*h*) social change, (*i*) education for citizenship, (*j*) education and discipline though more on the basis of Nanak's general view of life than on the Sidh Goshti, as also more from general point of view than from the angle of a pure educational thinker and practitioner For instance, the entire discussion under education and national integration, education and international understanding, education and women, etc has been developed more on the basis of the Guru's way of life than on the exposition of the Sidh Goshti Likewise, the treatment of education for citizenship, social change, curriculum, method of teaching and even the aims of education has been, in a way, arbitrary and disjointed. Indeed, the whole material could have been organized in a systematic way to pinpoint the Guru's central educational thesis, namely, the evolution of the Gurumukh, the 'man' in man in true image of the Divine so as to help him live a wholesome life, a life full and whole, in order to realize his primordial promise, viz. the emancipation of man from all that tends to self-limitation. What is, therefore, of great importance in Sidh Goshti, as also in the Gurus' educational philosophy, is their effort to divinize the whole concept of education and to so integrate its process, purpose and product that it evolves an integrated personality of every human being, devoted entirely to total human perfection, both material as well as ethico-spiritual, each being instrumental to the other in a kind of cyclic order. Even in regard to the status of teacher the discussion centres round the 'negative' capacity of the Guru more than of what would truly constitute his essential traits in the conception of Nanak and other Sikh Gurus

Besides, the most glaring observation one can make about this book is that it lacks coherence so much so that all its chapters end rather abruptly leaving much to the imagination of the reader More so, it suffers from editorial poverty, in that there is hardly a page which does not contain either spelling or printing errors in addition to wholesale repetition of paragraphs after paragraphs at different places in the book.

In brief, it is a poor piece of research, if at all, done rather hastily or impatiently. It seems to have been denied time and attention it really deserved to bring to focus the educational depths inherent in the Sidh Goshti. It has, in that way, belied the scope and height to which the study could have been raised. This is probably because the author preferred to dwell more on a summary of the Sidh Goshti than on the original text. However, despite its obvious lags the book is a welcome addition to literature on the philosophy of the Sikh Gurus. It serves a useful purpose in highlighting certain basic concepts rather than making an indepth study into what really makes educational philosophy after the conception of the Gurus. None-the-less, it makes one thing very clear that the Sidh-Goshti deserves deeper investigation particularly in terms of the Gurus' general and educational philosophy as revealed in their other works and more particularly so with reverence to different schools of educational thought—Eastern as well as Western—which have made their impact on education down the ages. Indeed, it suggests a colossal task for educational research workers and scholars interested in the study of the Great Gurus' philosophy.

D.N. KHOSLA □

From the Librarian's Desk

ABBI, ANVITA. *Semantic Grammar of Hindi. A Study in Reduplication.* New Delhi : Bahri Publications, 1980, pp 159

THE book is published under series in Indian languages and linguistics. The book brings forth many current issues in the area of Hindi semantics. The author has attempted to analyse such an intricate phenomena like reduplication and has also tried to explain how does it differ from its non-reduplicated counterparts.

BHATNAGAR, A.K. *Rajya Sabha. A Critical Study.* Allahabad : Chugh Publications, 1977, pp. 334

THE present study assesses the role of Rajya Sabha and sums up suggestions for the improvement in the composition and power structure of Rajya Sabha so as to make it an ideal Second Chamber of Indian Parliament. The case study method has been used to show the various dimensions of the power-profile of the Rajya Sabha. An effort has also been made to identify the place of Rajya Sabha in the family of Second Chamber in general, of Federal Second Chambers in particular, through the use of comparative method.

CHATTOPADHYAYA, DEBIPRASAD. *Marxism and Ideology* Calcutta. K P. Bagchi & Company, 1981, pp 273

THE book contains the papers presented at a seminar on Marxism and Ideology sponsored jointly by the Asiatic Society, Calcutta and Indo-GDR Friendship Society, West Bengal. Marxist leaders of the country have attempted to explore the possibility of valid application of the fundamentals of Marxism on a rather wide range of subjects related to Indian studies.

JANGAM, R.T. *Outline of International Politics,* 2nd ed New Delhi. Allied, 1981, pp 234

THE work undertakes a clear and concise analysis of the basic concepts of international politics such as the definition of international politics, the features of the state systems; the constituents of national power, the foreign policies of the major powers, the principles and practice of diplomacy; the phenomenon of imperialism or colonialism. The other basic concepts which have been examined are those of war, balance of power, collective security, and disarmament. The problems of international law and inter-

national organization including world government have received a fairly sustained treatment.

KAUL, B N. *Duliles Resurrected.* New Delhi Pulse Publishers, 1980, pp 172

THE author has attempted an objective analysis of the current cold war in the context of irrefuteable fact—both obvious and oblivious This work links the roots of current cold war with that of fities. It discusses the views of both sides involved in the current international conflict and arrives at definite conclusion.

LI, YAO TZU, JANSSON, D G. AND CRAVALHO, E G *Technological Innovation in Education and Industry.* New York . Van Nostrand, 1980, pp. 304

SYSTEMATICALLY evaluating technological innovation from the inception of an idea of its final form in the market place, the authors demonstrate how the innovative process can be effectively communicated in the classroom and successfully integrated into business setting. There is full discussion of the logical basis of parameter analysis, its contrast to the rigid thinking of traditional engineering education, and the organization of parameter analysis techniques into a 'building blocks' format to facilitate teaching. Also included are examples of effective classroom strategies, techniques for increasing motivation, new viewpoints on how management functions as an information system, tactics for improving communication between management and technological personnel, ways of acquiring greater funding, and much more

MELLOR, JOHN W. *India : A Rising Middle Power.* New Delhi : Selectbook Service Syndicate, 1941, 1981, pp 374

INDIA is one of the largest and most broadly industrialized of the rising middle powers of the Third World. It has increasing influence on the outcome of major issues of global interdependency . Nuclear proliferation, natural resource control, trade relations, and population growth. The Western world generally, and the US in particular, remains ill-equipped to understand and adapt to this rapidly changing global reality. This study attempts to highlight the basis of India's global role.

REDDY, P. SAROJINI *Judicial Review of Fundamental Rights.* New Delhi . National Publishing House, 1976, pp. 394

THE book is an attempt to study fundamental rights as enshrined in Part III of Indian Constitution and the extent to which they have been safeguarded by the Supreme Court and High Courts The techniques of case law citation has been followed. Amongst others, the judgement of the Supreme Court in case of Keshva Nanda Bharati has been critically analysed. Some suggestions for more effective judicial protection of fundamental rights have also been made

ROY, M.K *Princely States and Paramount Power, 1858-1876: A Study on the Nature of Political Relationship between the British Government and the Indian State* New Delhi . Rajesh Publications, 1981, pp 275

THIS work is a study on the formal transformation of the Indian princes from allies of the East Indian Company to vessals of the British Crown during the period 1858-1876 It analyses the process leading to the assertion of paramountcy by the British Crown through the Royal Titles Act in violation of assurances contained in the Queen's Proclamation. It contains case studies in respect of several princely states, including

Mysore and Baroda, illustrating the different stages and aspects of British policy

SPROTT, RICHARD L. (Ed.) *Age, Learning Ability and Intelligence*. New York : Van Nostrand Reinhold Company, 1980, pp. 170

THE book presents a thorough overview of the current state of knowledge about intellectual functioning in old age. It draws on cross-sectional, longitudinal, and 'mixed' experiments with both human beings and animals to analyse how the aging process affects cognitive ability. Covering skills like problem-solving, memory, and perception, the authors probe the validity of administering standard intelligence tests to senior citizens. Genetic, environmental, motivational, demographic, and health factors are considered in depth, with special attention given to how diseases like hypertension promote senile behaviour.

K.L. LUTHRA □

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TO OUR CONTRIBUTORS

The Journal of Indian Education invites articles and original research papers, preferably on audio-visusl aids for teaching and modern methods and problems of teaching geography in classrooms. The contributions should reach:

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New Delhi 110016

On Writing a Textbook

TEXTBOOK writing is differently evaluated in different countries There are nations where textbook writers are included in the annual award lists and are honoured There are nations where university professors are drafted for the purpose of improving textbooks so that their country remains at the top in 'knowledge game' There are nations which send regularly their scholars abroad to assess advances in various disciplines and report back to their nation's textbook advisory committees. There are countries which devote their energies to evolving codes for writing textbooks. Several questions arise in this regard. For example, who shall write the textbook ? Why would a person who has reached the top in his field be asked to dilute his knowledge so that it may become readable to a student ? What are the norms for writing a textbook ? To what extent truth be distorted to suit the whims of the contemporary persons in power ? Can truth be presented in a textbook ?

Minor questions like Why does one write a textbook ? For whom is a textbook addressed—to the student, teacher or the parent or to all of them ? or, how much of the textbook shall a student remember ? have yet to be answered. We have also to decide about the competence of the person who shall be asked to write a textbook. Can a textbook be written by a committee or an advisory board ? We might as well pay some attention to the degree of respect we want to accord to the textbook writers. It is not good enough that any or every person may be assigned this work. We ought to be very choosy about it. Perhaps a top-level conference on this issue may advise several textbook committees that we have. It is not a light matter which one could wish it away. Serious as the question is, it demands national attention so that textbooks may serve better our posterity.

GENERAL EDITOR

November 1982

THE United Nations agencies, in spite of the normal concern of their staffs with pay and promotions, travel allowances and pensions, enjoy or suffer a life of unearthly detachment from the normal concerns of men. civil servants without a country to administer, experts with no certainty that their advice will be taken, diplomats who cannot initial a treaty, enquirers who do not know for whom they are directing their trained curiosity For some this air-conditioned life becomes so dessicating that they escape to freedom. To others it becomes second nature and if they emerge they seem in danger of disintegrating, like prehistoric bodies out of bogholes "

MARGARET DIGBY
The Little Nut Tree

In Search of Panacea for Educational Ills

SALAMATULLAH

EDUCATIONAL profession is occasionally accused that it lacks self-criticism of its own weaknesses. That it tries to find fault with other social institutions for the ills education is suffering from, and that it exhorts all others—the state, the government, the society, and so on—to change their ways. But the profession seems stubbornly resistant to innovations in its own sphere of activity.

Maybe, as a response to the above charge, it has come about recently that a conscious effort is in evidence on the part of educators to diagnose the ills in the educational process itself, and to find out the needed remedies. For instance, we see recently a growing interest in questions of educational methodology, that is, in creative and effective techniques of teaching and evaluation A case in point is the current advocacy of modern educational technology and new devices of evaluation of the educational outcome The protagonists of methodology sometimes, in their zeal, go so far as to assert that the main thing in education is not so much the acquisition of knowledge, as the acquisition of the *methods* of acquiring knowledge. This assertion seems to imply that methods of acquiring knowledge are independent of systematically organized knowledge. It is an untenable position indeed.

To claim that refinement of methodology can, by itself, cure educational ills and that pedagogies should, therefore, concentrate on the educational process is like putting the cart before the horse. For, it assumes that education has got nothing to do with the philosophical and sociological questions of pedagogy, or that these questions have already been solved. It is controvertible that not only the questions regarding the educational process, but all pedagogical questions, e.g. goals of education, curriculum, freedom and control of education, etc in the last analysis, are concerned with philosophy or ideology, that is, the general world outlook and the specific concept of social order that the education seeks to maintain or promote. Moreover, it is generally accepted that these questions have not so far been squarely

faced and that they cry for solution.

II

In the educational methodology, we see of late that an increasing emphasis is laid on the principle of differentiation. Though it is a fact that individuals do differ in many ways including their interests and abilities to learn different kinds of things, yet there is little justification in making a fetish of the principle of differentiation the way it is sought to be applied even at the early stage of elementary education, when the inclinations and abilities of children are not likely to be manifest. An early characterization of a large number of children as 'thing-thinkers' or 'practical-minded' is based on the prejudice that the majority of people are incapable of acquiring theoretical knowledge. This leads to streaming of such children in courses that have a dominant labour component It is inevitable that in a class society, these are the children who belong to the toiling masses. Thus, the principle of differentiation tends to serve as an effective device to maintain the class structure of society in the interest of the dominant minority and to the detriment of the dominated majority.

The extreme form of individualization of instruction is represented by the principle: Learning is an individual process and everyone has his own way of learning: so there really ought to be no fixed or common curriculum, and no demands should be made on pupils in schools. What is staggering, this is sought to be done under the plea of concern for personality of the child, although, in fact, individualization based on this principle deprives the child's personality of the stimuli to develop further, to push forward and to mobilize all potentialities of the child to learn from his peers It impairs the system of group-learning and class teaching which may create a stimulating environment for learning.

Modern philosophy of existentialism has provided an ideological justification for rugged individualism and this kind of pedagogies. It talks of "humanist" pedagogy which means unlimited individualization of the educational process In fact, it is a continuation of teaching methods like the Dalton Plan and the Winnetka Plan developed in the U.S.A. during the third decade of the twentieth century But it is a false pedagogy, which considers the individual's development in isolation from his manifold social relations.

What is more, in the name of personality, a myth is created that there is an irreconcilable contradiction between work and collective education, on the one hand, and recreation and creative education on the other. This dichotomy is again a peculiar characteristic of the class society. Historically the role of labour has been important in the all-sided development of man's intellectual abilities and in the creation of possibilities for varied creative and social activity. Idealist thinkers and bourgeois educators have sought to denigrate the role of labour and collectivism in the development of man's creativity They have propagated the erroneous view that creativity is entirely a function of the individual's intellectual effort, and that it is unrelated to the social development brought about by collective labour of mankind. That is why educators of the idealist way of thinking pay only a lip-service to socially useful productive work as an integral part of the school curriculum. If they accept its importance at all, it is mainly on the pragmatic grounds that material production being a necessity of life, education should try to develop productive skills.

In a class society, it is but inevitable to

have a lasting conflict between work and play or recreation, between production-oriented education and creative education, and between education for collective development and education for individual growth Bourgeois educators of our time have only attempted to make this conflict absolute by inventing the myth about human nature that collectivism contradicts in born individualism, and that collectivist conviction is foreign to human nature This, in fact, is a reflection of the existing social structure—the capitalist social system based on freedom of individual enterprise and private profit—which has got nothing to do with the innate human nature.

There is no wonder, then, that improvement in the educational process, and instructional methodology is sought precisely to develop individuality and the so-called creativity and personality. But even if an effective methodology is devised to attain this goal, one may question its desirability and validity on grounds of the philosophical and sociological implications of such a goal.

III

The most important component of educational activity is the philosophy or ideology that informs it. Philosophy connotes world view—concept of man and society—which guides all educational effort, at times explicitly but often implicitly Education should, therefore, be viewed in this larger perspective.

Educational ills can realistically be identified in relation to the nature of society education is designed to serve, because the task of education is to develop man in conformity with the needs and interests of society There is certainly something wrong with education, if the process and product of education do not accord with the social goals

The social goals are dynamic in nature and demand social change for their fulfilment. For instance, the cherished goal of establishing a socialist society in India implies a significant transformation of the existing Indian society. In order to achieve this goal, there has to be a corresponding transformation of the educational system. The educational effort would, then, have to be directed towards developing such a man as could contribute effectively, first, to bringing into being the socialist society and later to strengthening it in collaboration with others

However, we must recognize that it is too difficult to effect educational transformation without social transformation In fact, both go hand in hand and reinforce each other Even the task of transforming education in accordance with the demands of socio-economic development in a capitalist society is not easy, as it comes up against the vested interests of the ruling classes. In an effort to retain their educational privileges, which serve as props to their social status and political power, they retard the realization of the basic educational reform and adopt half-way measures that do not solve the problems of our time. On the contrary, these measures only intensify the problems. For example, in order to solve the problems of educated unemployment and low rate of production, it was recently proposed in India to vocationalize education, particularly, at the secondary stage. But in its planning and execution, much was left to be desired, with the result that nothing worth-while could happen Similar has been the fate of some other apparently useful schemes like universalization of elementary education, provision of equal educational opportunities, modernization and upgradation of curriculum, integrated school system

and compensatory education This is true not only in India, but even in some advanced countries, such as the U.S.A and the U.K.

To illustrate the point, one example may suffice The integrated school which seeks to ensure equal opportunity of education to all citizens could be an experiment in genuine democratization of education. This is in contradiction to the selective system of the capitalist society The latter assigns children too early to different types of schools which are not of equal value; and thus children of the toiling masses are deprived of access to education that could offer chances for better material gains. The idea of comprehensive school in the U K has been under vigorous attack to slow down the reform in every possible way, even though the comprehensive school has already diluted the idea of equal opportunity by providing for two branches to divide pupils into the so-called 'mentally capable' and 'practical thinking' pupils by an insurmountable wall. This separation of pupils into the academic and non-academic streams is in accordance with the model of the U S.A. But this is the very anti-thesis of the idea of equal educational opportunity, as it keeps the social selection of youth intact, and ensures the maintenance of a hierarchical school system.

It is obvious that the vested interests would use all the means at their command to maintain the *status quo* and to sidetrack any effort made to bring about social change that may jeopardize their privileges and benefit the masses. Sometimes these means are very subtle and appear quite reasonable. For example, currently a misconception of social change is being created by advancing the theory that social change automatically occurs with technical progress. The exponents of this theory would make people believe that the scientific and technological revolution tends to obliterate class differences in society. They assert that in the 'post-industrial' society with the cybernetic-electronic development, the social weight and the source of power shift from capital to organized knowledge It implies that capitalism will wither away with the advancement and spread of the knowledge of science and technology.

Many renowned educationists of capitalist countries like T Brameld and J Lauwerys share this view and apply it to the sphere of education They uphold that education based on science and technology may promote liquidation of the class struggle in society. Herein they see convergence of the capitalist and socialist systems of education. On the face of it, this is a simplistic view of the reality. All this proceeds from the erroneous idea of 'technological determinism' according to which the broad application of scientific discoveries and the most up-to-date technical means leads to the 'harmonious' solution of the philosophical and sociological problems of education in the capitalist world. But the reality, as we face it today, belies this prognosis.

Formal education, as organized and imparted in institutions is, by and large, conformist in nature The school requires conformity for its own survival and, therefore, it tries to shape students to conform to the social norms of behaviour. As such, it seems inconceivable that the goal of social change can ever be attained through formal education. Yet, the possibility should not be ruled out that the school, particularly in a democratic country, can play a supportive role in the struggle carried on by other social forces to bring about social change The scope of such a role will, of course, be determined by the extent of freedom allowed in practice by the organs of the state power.

When does genuine social change take place? It occurs when a significant number of people stop believing in the inevitability of the existing state of things, when they

withdraw support from social institutions which might have served past generations, but no longer do now, when they refuse to submit to the conditions of living which might have been fair earlier, but are no longer so. Such changes, when they take place, are a product of true education.

Education can, therefore, play its role in respect of social transformation by creating awareness about the nature of the existing society, about the ills it suffers from and about the possible remedies that could be attempted to cure them This would call for a radical transformation of education in all aspects—the objectives, curricula, methods and organization

Non-formal education has, perhaps, a greater potentiality in supporting social transformation as demonstrated by Paulo Freire in his experiment with adult illiterates in Brazil.

IV

If the school is to play a supportive role in social transformation, the traditional concept of teaching and learning has to change. As it is, the whole process of education centres around one dominant exercise—narration. It is the prerogative of the teacher to narrate and the obligation of students to listen Subsequently, students may also be called upon to narrate what they have listened. Narration leads students to memorize mechanically the content, be it values or cognitive material Such an exercise cannot but make the entire educational process insipid and lifeless.

This is, what is called by Freire, the 'banking' concept of education, because this kind of education looks like an act of depositing, in which students are the depositories, and teacher is the depositor Under such a nexus, there is little communication between the teacher and the students The teacher issues communiques, as it were, and the students patiently receive, memorize and repeat them. In the banking concept of education, knowledge is bestowed as a gift by those who claim themselves to be knowledgeable upon those who are considered to be quite ignorant This negates education as a process of inquiry, a search of truth, and makes education an instrument of domestication rather than a means of liberation.

Verbal lessons, reading requirements, techniques of evaluation, criteria for promotion, devices for enforcing discipline everything under this concept of education is detrimental to inquiry and thinking If it is true that thought has meaning only when generated by self-activity, the subordination of students to teachers becomes indefensible.

Education should, therefore, begin with solving the teacher-student contradiction—a contradiction where the teacher assumes the active role of 'subject' and the student is assigned the passive role of 'object'. It must be recognized that teacher and student are both subjects, co-workers in the joint enterprise of unveiling reality and reacting knowledge through common reflection and action. This does not mean pseudo-participation but committed involvement of students in the educational process

This characterizes what is termed by Freire as problem-posing education. Here the teacher is no longer the one who only teaches, but one who himself learns along with the students in a dialogue-situation. Thus, learning becomes a two-way or reciprocal process between the teacher and the students. In this process, arguments based on authority are no longer valid. The teacher's role is that of a leader who cannot think *without* the students, or *for* the students, but who can think only *with* the students.

Students like other people are increasingly confronting problems that challenge them. Their response to a particular challenge gives rise to new challenges followed by new responses resulting in new understandings This is the way to self-education, which is at once meaningful and reassuring.

The two educational concepts and practices under them come into conflict. Banking education shuns dialogue which, in fact, is indispensable to the act of cognition in the case of problem-posing education Banking education treats students as docile and manipulable objects, while problem-posing education makes them critical thinkers and authentic beings. Banking education inhibits creativity, problem-posing education is based on creativity, and stimulates true reflection and action. To sum up, banking theory and practice of education fail to consider men as historical beings with potentiality to evolve and develop themselves On the contrary, problem-posing theory and practice take man's historicity as their starting point.

Problem-posing education, as a humanizing and liberating force, stresses that men subjected to domination and exploitation must fight for their emancipation and freedom from exploitation. "To that end, it enables teachers and students to become subjects of the educational process by overcoming authoritarianism and an alienating intellectualism"

In the revolutionary process of social transformation one cannot over-emphasize that teachers as leaders must not employ the banking method, even as an interim measure, justified on grounds of expediency to get quick results, with the intention of later adopting the problem-posing method. Teachers must avoid the temptation to indoctrinate. They must be dialogical from the very beginning and continue to be so till the end, that is, till the social transformation becomes an accomplished fact. Otherwise, there is a real danger for the revolutionary effort to misfire □

Effect of Training in Selected Teaching Skills Using Microteaching on the Teaching Competence of Social Studies Teachers

A Field Study

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THE GROWING concern regarding the improvement of teaching competence through well-designed programmes of student-teaching based on scientific knowledge has led to a number of innovations. Microteaching is one of them It is a skill-based training technique. The technique is based on the premise that teaching is a complex skill which can be broken down into a set of simpler skills. The trainees acquire mastery over each of the skills in simplified teaching situations. Once the component skills are mastered individually, they are integrated into the composite teaching through guided training and finally exposure to real teaching situation.

Microteaching has been found to be more effective than the conventional programme of student-teaching in acquiring teaching skill as well as general teaching competence (Chudasam 1971, Markel 1972, Bhattacharya 1974, Passi and Shah 1974, Singh 1974, Abraham 1974, Joshi 1974, Thresiamma 1975, Das 1976) in India and (Kallenbach 1967, Goodkind 1968, Young and Young 1969 and Wragg 1971) abroad. Kallenbach (1969) also found it to be more economical. The Department of Teacher Education in NCERT developed Indian model of microteaching through a series of studies on variations of microteaching components (Das 1977, 1979, Jangira 1980).

Encouraged by the optimistic results with the preservice teacher through microteaching, it was considered desirable to try out the technique as a means of improving the teaching competence of inservice teachers. The work with inservice teachers using this technique is conspicuous by its absence in the country. Working with inservice teachers assume vital significance since most of the teachers have undergone preservice training which is quite weak in practice. Secondly, new developments in the art and science of teaching and teacher training have opened up new vistas. It was, therefore, considered desirable to find out the utility of training the inservice teachers in teaching skills using microteaching approach. The present field experiment is an attempt in this direction.

Statement of the Problem

The present study attempts to answer two questions. Firstly, does microteaching help in improving competence of social studies teachers in the use of the specific skills of (*i*) probing, (*ii*) reinforcement, (*iii*) stimulus variation, (*iv*) illustrating with examples, and (*v*) increasing pupils' participation ? Secondly, does training in these five specific skills using microteaching help in improving teaching competence of the social studies teachers ? The five skills for training were selected on the basis of the difficulties faced by the teachers in their use.

Objectives

The specific objectives of the study can be stated as under:

1. To study the effectiveness of microteaching improving the competence to use the skills of probing, reinforcement, stimulus variation, illustrating with examples and increasing pupils' participation by inservice studies teachers.
2. To study the effectiveness of microteaching in the improvement of teaching competence of inservice social studies teachers.

Hypotheses

The following hypotheses were formulated for realizing the objectives outlined above.

1. There is significant gain in the competence to use the skills of probing, reinforcement, stimulus variation, illustrating with examples and increasing pupils' participation scores on inservice social studies teachers after training in these skills using microteaching.
2. There is significant gain in the teaching competence scores of social studies inservice teachers after training in the above five skills using microteaching.
3. The teaching competence and the competence to use individual skills gained above is retained by the social studies inservice teachers eight weeks after the training.

The first two hypotheses refer to training effects ; the directional hypotheses have been formulated due to the training focus. The third hypothesis refers to the transferability and retention of the training effects.

Design and Procedure

The study follows single group pretest-post-test design which envisages pre-training and post-training assessment of teachers on skills competence as well as overall teaching competence. Twenty willing female inservice

social studies teachers teaching Class IX were selected from the girls' higher secondary schools of Delhi. One teacher dropped out due to illness.

Two teams of two observers each, one from the Department of Teacher Education and one from the State Institute of Education, Delhi, were formed to assess teaching. Before undertaking, the four observers discussed Baroda General Teaching Competence Scale (BGTCS), observed a few lessons and they found their ratings more or less the same which implied an acceptable inter-observer agreement

Two lessons of 35 minutes each of the 19 teachers were then observed by the teams of observers, before training in teaching skills. The lessons were rated on BGTCS and skill competence These provided pre-training scores. The teaching skill training input was then provided in a 12-day course by the project team comprising members from the Department of Teacher Education (NCERT) and State Institute of Education, Delhi The training input included the concept and practice of microteaching, the presentation and practice of the five teaching skills, and the integration of teaching skills. The training was followed by two sets of post-training assessment of teaching —one immediately after the training and another after 8 weeks of the training. The post-training assessment on skill competence and overall teaching competence was carried out in the same way as was done in the case of pre-training assessment.

Optimistic Augury

In order to test the two hypotheses formulated for the present study, t-test involving correlated means was used Since the study used single group pretest-post-test design, the means, standard deviations, correlations in respect of pre-training and post-training scores on skill competence and overall teaching competence along with corresponding t-value have been summarized in Table 1.

TABLE 1

PRE-TRAINING-POST-TRAINING I MEANS, STANDARD DEVIATIONS AND T-VALUES

(N=19)

Sl No.	Skills	Means		SD		r	t*
		Pre-training observation	Post-training I observation	Pre-training observation	Post-training I observation		
1.	Probing	2 95	4.53	98	86	37	6. 7
2.	Reinforcement	2.79	5 00	.89	.86	.13	11 05
3.	Stimulus variation	3.00	5.05	72	1.22	.53	8.54
4.	Illustrating with examples	3.10	4.84	.87	94	.72	12 43
5	Increasing pupils' participation	3.00	4 95	.72	62	.63	13 93
6	Overall teaching competence	66 63	94.74	12.55	16.50	56	8.67

*Significant at 01 level

It will be seen from Table 1 that the mean scores of the teachers on the competence to use the skills of probing, reinforcement, stimulus variation, illustrating with examples and increasing pupils' participation have shown significant improvement after training in these skills using microteaching technique The gains are significant at 0 01 level. The highest mean gain has been on the skill of reinforcement followed by the skills of stimulus variation, increasing pupils' participation, illustrating with examples and probing, respectively The results are in agreement with the studies in training effectiveness conducted elsewhere (Perrot 1974) and those conducted in India with pre-service teachers (Das 1976) This implies that it is possible to improve teachers' competence to use the teaching skills selected for the present study through microteaching technique The results support the first hypothesis.

Coming to the overall competence of the teachers who had undergone training in the use of the selected five skills in the present study, the table indicates that the mean scores increased from 66.93 to 94 74 after the training The gain on scores on the general teaching competence is significant at 0.01 level This implies that the training in the five teaching skills, namely, probing, reinforcement, stimulus variation, illustrating with examples, and increasing pupils' participation have contributed to the improvement of their overall teaching competence. But a question can be raised at this stage. If it is possible to improve overall teaching competence significantly through training in five skills, what is the use of identifying 20 skills or what is the relevance of the remaining 15 skills The question is relevant as well as pertinent. The answer can be found when the post-training 1 score of 94.74 is read against the maximum GTC score of 140. The gains are significant, but there is still a scope for its further improvement. Probably, through training in more skills this score can be further raised. As a result, teaching competence is likely to prove further

These results also point to the transferability of the training effects acquired in simulated condition in microteaching situation to the actual teaching in the assigned teaching position of the teachers, since post-training 1 measures were taken in actual teaching in their schools

The third hypothesis formulated for the present study refers to the retention of the training effects As pointed out earlier in the report, the post-training observation 2 was carried out after eight weeks of post-training observation 1. The means, standard deviations, correlations between pre-training and post-training scores from post-training observation 2 and t-values have been given in Table 2.

It will be seen from Table 2 that the gains of teachers in skill competence as well as overall teaching competence which were significant in post-training observation 1 continued to be significant after eight weeks when post-training observation was carried out. If the means in Tables 1 and 2 are compared, one finds a slight improvement which implies that the training gains were not only retained but were further improved. This may be due to the consciousness of the teachers about the use of the teaching skills in their teaching. There is a likelihood that their teaching competence might have also improved through practice in their ascribed teaching positions.

Microscopic View

Being an inservice field experiment with limited number of teachers, profiles of each teacher containing the progress of competence to use each of the five specific teaching skills and overall teaching competence were prepared for examining the microscopic

TABLE 2

PRE-TRAINING-POST-TRAINING 2 MEANS, STANDARD DEVIATIONS AND T-VALUES

(N=19)

Sl. No.	Skills	Means		S D.		r	t*
		Pre-training observation	Post-training 2 observation	Pre-training observation	Post-training 2 observation		
1	Probing	2.95	5.05	98	1.06	23	6.50
2.	Reinforcement	2.79	5 16	.89	.87	.11	9.11
3	Stimulus variation	3 00	5 16	72	86	.33	10 80
4.	Illustrating with examples	3 10	5 21	87	70	54	12.52
5	Increasing pupils' participation	3,00	5 31	.72	.90	.35	10 50
6.	General teaching competence	66,63	98 32	12 55	15 65	.45	9.21

*Significant at —.01 level

view A study of the profiles reveal that, by and large, teachers improved their general teaching competence and competence to use the five specific teaching skills selected for practice using microteaching. However, some teachers in some skills showed slight tendency to decline after eight weeks of their training. The natural question arising out of this tendency is as to why do they show this declining tendency ? Has it something to do with their personal characteristic or what has been called as 'formative experience' by Dunkin and Biddle (1974) ? Has it something to do with the contextual variables relating to the school and the classroom or has it something to do with the content of the lessons observed ? It is that the observed behaviour is not representative of the behaviours in respect of the skills ? These questions are pertinent in this context, but can be answered through empirical research. This tendency was also observed in the interaction variables serving as the training inputs in Jangira (1979). The implication of this tendency is to design a comprehensive project on training having data on characteristics of the teachers to be trained, institutional characteristics, curriculum characteristics, pupil characteristics, etc Only this type of study can provide answer to such questions which are very vital for the teacher-educators and extension workers.

One profile has indicated that a teacher was having high score on the competence to use three skills during pre-training measurement Obviously, he did not show further improvement on the competence to use these skills. This has implications over the organization of inservice training in the use of teaching skills employing microteaching. The diagnostic remedial programme approach can economize inputs in such a training programme. The teachers' competence to use the skills can be assessed before training. The teachers can then be grouped according to skill deficiency. They may be provided training in the skills in which they are deficient. This approach would save the effort wasted as in the case of the teachers who already possess high competence to use

specific skill(s).

Conclusion

Microteaching appears to be promising in improving skill competence and overall teacher competence of social studies teachers. Further studies will throw more light on the promise of the technique emerging from the present field experiment. More work is needed to increase efficiency of the technique in terms of economizing input as suggested in the form of diagnostic remedial programme or in terms of improved output in terms of training effects and their retention. The study has a message for both extension workers engaged in inservice training of teachers as well as research workers in the area of microteaching. The former need to utilize the technique in training inservice teachers while the latter may continue to search for empirical data based answers to the unanswered questions.

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Guiding Creative Talent

The Role of the Counsellor

KHORSHED A WADIA

HIGHLY creative individuals usually have very strong creative needs They have a natural deep-seated interest in the mysterious, the unknown and the unexplained They are inclined to question, to explain and to test ideas before accepting them. Creative individuals, however, need encouragement to keep up their efforts The aim of guidance workers should be not only to nurture individuality and creativity but to promote healthy kinds of individuality and creativity as well as community. Creative individuals need to be given guidance from the kindergarten stage onwards if they are to achieve a proper balance between their need for creativity and conformity. Many creative individuals are unable to resist pressures from parents and teachers to be like others in the group. These pressures "which push him towards the mean" are aimed at reducing variability and encouraging uniformity.

Parents prefer their children to be well-adjusted The mother of three gifted children said. "I am not interested in geniuses, all I want to do is to raise my kids to be normal, well-adjusted adults." One teacher admitted frankly that her aim is to reduce variability among her students when she said, "When I am finished with my class in June, the slow children are a little faster and the fast have slowed down a bit"

Creative Individuals Need Help in the School

1 They need to be made to recognize the value of their own talents otherwise they will continue to despise what could be their most valuable assets. It is difficult to believe that a talent which they possess is of value if everyone ridicules it. Teachers and counsellors can build the creative child's confidence by administering tests to discover his areas of giftedness and discussing the results with the child and showing him ways in which the ability can find expression.

2 Sometimes creative individuals are exploited by their elders, to satisfy their own

ego needs In such cases teachers and counsellors may have to intervene to prevent this misuse of the child's talent and the psychological harm the child may suffer

3. The creative individual may also lack some of the abilities or skills he needs to make the best use of his talents. There may also be some limitations in his environment. Parents and teachers are not always able to provide all the resources creative children may need to develop their abilities. The school counsellor can help these youngsters to accept these limitations, not cynically or with resignation, but in a constructive spirit Such limitations as tallness or shortness, a physical handicap such as defective hearing or eye-sight, can be accepted by the child if the school can provide proper medical assistance and psychological understanding

4 Many discoveries have resulted from the exploitation of a chance occurrence or an unexpected incident Creative individuals may fail to see such opportunities because they have certain problems of adjustment. The teacher or the counsellor can help the individual to free himself of such handicaps and be alert to all opportunities, so that they may make full use of them.

5. Creative children should be encouraged from an early age to make their own decisions in all areas such as choosing friends, hobbies, activities and even the clothes they would like to wear. They should also be given guidance and encouragement in making plans and goals to work towards achieving

It is a popular fallacy that gifted and creative children do not need guidance and good instruction to develop some of the fundamental skills essential for any kind of achievement.

6. Studies of outstanding individuals in almost all fields have revealed that such persons are impelled by feelings of mission or purpose. They believe that what they are doing is worthwhile and they are, therefore, aroused to make an all-round effort. The school counsellor can assist creative children from an early age to find a purpose and to hold on to it. The school can be made an exciting place where learning and thinking are tremendously important, so that creative children may achieve more than we thought possible.

7. Highly creative children also need help in recognizing that divergency should not be equated with mental illness or delinquency. In our culture, since parents and professional workers fail to understand divergency, the counsellor will have to explain to them the difference so that they can get rid of their misconceptions and change their attitudes Even the creative children need help in understanding their strengths.

8. Studies of outstanding creative persons have shown that these individuals also possess certain characteristics that are generally regarded as rather obnoxious. These characteristics are likely to create problems for their parents, siblings, peers, teachers and all others with whom they have to associate. The counsellor working with these children needs to help them to maintain those characteristics which are essential for developing their creativity and removing or reducing to an acceptable level those qualities which are likely to threaten others or make them feel uncomfortable.

Stein (1958) on the basis of a study of creative research chemists developed a set of helpful principles which could enable these research chemists to become less obnoxious, without at the same time sacrificing their creativity. Torrance (1962) has modified this advice so as to make it apply to creative school pupils as follows

"Help the gifted child maintain his

assertiveness without being hostile and aggressive

"He must be aware of his superiors, peers and subordinates as persons.

"He may work alone but be must not be isolated, withdrawn, or uncommunicative.

"In the classroom he must be congenial but not sociable; outside the classroom he must be sociable but not intimate.

"He must know his place without being timid, submissive or acquiescent and must speak 'his mind' without being domineering.

"As he tries to gain a point, he can be subtle but not cunning or manipulative

"In all his relationships he must be sincere, honest, purposeful, and diplomatic.

"In the intellectual area, he must learn to be broad without spreading himself too thin, deep without being bookish or too scientific and sharp without being over critical."

There are at least six special roles which school guidance workers can play in helping highly creative children maintain their creativity and continue to develop along the right lines. These are explained below

1. *Provide a Refuge*

Society is not tolerant or kind towards creative thinkers Getzels and Jackson (1958) have found from their studies of highly creative adolescents that they are estranged from their parents, teachers and peers. The Minnesota studies by Torrance (1960) have shown that the same is true of children in the elementary school Teachers were irritated when a pupil presented an original answer which differed from what was expected. Even the child's peers labelled his unusual questions and answers as 'crazy' or 'silly'. The highly creative adolescent or child needs encouragement. The counsellor must understand that the estrangement exists and he must create an atmosphere which will make the creative individual feel safe

2 *Be a 'Sponsor' or a 'Patron'*

The counsellor must, regardless of his own views, encourage and support the creative individual in expressing his ideas, testing them out and thinking through things for himself. The counsellor must protect the creative individual from the reactions of his peers so that he can try out his ideas Without this support from the school counsellor or an understanding teacher, the child may not be able to keep his creativity alive.

3. *Help Him to Understand His Divergence*

The creative personality, according to Torrance, is characterized by a high degree of sensitivity, a capacity to be disturbed and divergent thinking. Creative children need help in understanding themselves particularly their divergence. There are certain critical periods in the lives of creative children when being understood is all that they need to help them to handle the crisis and to continue to grow and develop their creative strength A good counsellor can provide the insights and motivation required by the child at such periods.

4. *Let Him Communicate Ideas*

When a creative child has some ideas or tests them and modifies them, he has a strong urge to communicate the ideas to someone who will understand Yet, some of the most c eative children "do not speak out their ideas" because they knew what will happen when they do "speak out their ideas." The teacher is usually irritated and

squelches him rather roughly and his peers make fun of his ideas. Usually the creative child is so far ahead of his classmates and even his teachers that he gives up hope of being able to communicate with them All guidance workers must, therefore, provide these children an opportunity to communicate by giving them genuine respect and sustaining their strong urge to explore and innovate.

5. *See that His Creative Talent is Recognized*

Many investigators have questioned the effectiveness of scholarship programmes They think that much of the $ 100,000,000 available annually in the U.S.A. for college scholarships may be going to the wrong individuals—those who can get good grades but have little creative talent. Getzels (1960) has also pointed out that the tests used for college admission are biased in favour of students with 'convergent' intellectual ability He made a plea at the meeting of the American Educational Research Association that colleges recognize the ability of superior 'divergent' students and find a place for them.

6. *Help Parents to Understand Their Creative Child*

Frequently the failure of parents to understand their highly creative children results in destructive hostility When teachers fail to understand such children the result is a refusal to learn, delinquency or withdrawal. Guidance workers need to help parents to understand that the child's abilities can be increased or decreased by the way he is treated. The way parents and teachers treat their children's creative needs determines the type of direction these abilities take. It is the function of the home and the school to provide the kinds of enriching experiences and guidance which will help them to develop and function fully

The counsellor should help parents to recognize that criticism—making fun of the child's ideas or laughing at his conclusions —can prevent the child from giving expression to his ideas. The parents should stimulate the child to explore, ask questions and try to find answers. Counsellors should be sympathetic with parents who are irritated by the unending curiosity and manipulativeness of creative children. Endless questioning and experimenting can be inconvenient and annoying. But counsellors can help parents to recognize the fact that there is value in such curiosity and experimentation and that there can be no substitute for it

Many parents find it difficult to permit their children to learn on their own. Parents want to prevent children from the hurt or failure. But preventing children from coping with frustration and failure may rob the child of his initiative and resourcefulness All children learn by trial and error. Each child strives for independence and independence is a necessary characteristic of the creative personality ! Parents are relieved to learn this and out of this understanding a better parent-child relationship can develop

Conclusion

Each of the above roles can only be fulfilled by school counsellors. Our social expectations frequently prevent teachers or administrators from effectively fulfilling these roles as they are expected to attend to other school functions like teaching and maintaining discipline. The role of the guidance worker is to help students to develop their innate capacities to the full and to become mature and balanced indi-

viduals. Creative individuals have as much need, or perhaps a greater need, than the average individual for help from the counsellor to reach their goals.

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A Probe into the Problems of Educated Job-seekers

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MOST people consider education as the easiest ladder to all lucrative jobs So why, today, parents and elderly students build up rosy expectations to find their hopes finally shattered into pieces on completion of their education. They face frustration after sending their applications, meeting prospective employers and appearing in various competitions

Perchance, the State of Bihar is the worst affected, in that over nine lakh educated persons are unemployed Of these, 5,97,968 are matriculates, 1,72,971 intermediates, 1,43,283 graduates and 6,365 postgraduates This is a problem of more mouths, more wants and more goals with relatively less resources to buy food, to satisfy wants and to attain goals Most people are just parasitic on their elders in the joint family, others become vagabond or anti-social, still others either struggle for existence or get so much disgusted from their lives as to do away with The majority curse their hard luck. They remain idle and unutilized human potential of the nation—projecting a deplorable picture before the present students' community With the constant increase in their population, the problem has attracted the attention of both our educational planners and government authorities.

In Bihar, particularly Patna, no study of unemployed educated persons has been conducted, reflecting their different aspects, for a long time. Hence, under the auspices of the Institute of Economic Development and Social Change, a pilot summary of certain localities was conducted to probe into the various underlying factors. The analysis and interpretation of the field-data, collected through a survey schedule, have brought to light some problems and factors related to educated job-seekers of Patna. The survey

* The data for this pilot survey was collected and tabulated by Shri Y.N Jha, Research Investigator.

was carried through house-to-house visit during 1980.

The sample represented about 90 per cent males and 10 per cent females. Of these, 75 per cent declared themselves as unemployed and the rest as under-employed The majority belonged to 18-25 age-group, less than them between 26 and 35 years and the least (6 per cent) in between 36-45 years; probably because most people complete their education by 25 years of age. Half of the respondents were matriculates, nearly one-quarter graduates, less than them (19 per cent) intermediates and the least (3 per cent) post-graduates None was first divisioner, the majority represented by just passers, and a few held second division. Over 70 per cent has registered themselves with the employment exchanges, 39 per cent during 1971-73, 25 per cent in 1974-76, and the rest in 1977-79. Ten per cent of those registered had received responses from the exchanges About half of the registered candidates got their registrations renewed, mostly during 1979-80. This indicates low reliance reposed in the effectiveness of the exchanges in providing jobs. What sort of jobs they were in the look-out ? The responses revealed that over 30 per cent wanted clerical jobs, 16 per cent teaching jobs, 8 per cent government service, 4 per cent administrative posts, and surprisingly 40 per cent did not name any one They were prepared to accept any job. Few did reveal their preferences like telephone operator, police service, technicians, electricians, nurse and so on. This suggests that the high-level lucrative posts are beyond the purview of the employment exchanges. This is supported by the expected salary slabs, in that the majority (67 per cent) aspired for the common range between Rs 300 to 600 p.m., one-fifth (generally graduates) Rs. 500 to 599 p.m. and the rest below Rs. 499 per month. Immobility or homesickness is another obstacle in reducing unemployment. Unlike persons of Punjab, Delhi and Haryana, most persons suffer from this inertia, even for better jobs. This is evident because one-third wanted jobs in Patna, another one-third within Bihar province and the rest (40 per cent) anywhere.

With regard to individual status and their liabilities, it was found that 53 per cent were married, 57 per cent of them having four or more dependents, 23 per cent having up to three dependents, and 20 per cent without any liability. Next question disclosed as to how and from where they met their expenses ? Who supported them ? The analysis revealed that 86 per cent of them were supported by their fathers and the rest by their relatives. Others living in individual families were self-dependent on their part- or full-time jobs, looking for better jobs due to their low-salary, lack of security or respect, unsuitability to the job, etc. Again, what made people think themselves suitable for the jobs sought for ? Surprisingly, 57 per cent did not know or reply at all, partly due to lack of self-awareness of their employment potentiality, they might aspire for. Only 13 per cent stated "past experience, 10 per cent qualifications and the rest, typing training, accounts, etc " Partly ignorance about the various job-titles and their requirements might be responsible for their inability to name the jobs. Certain universities do have well-established employment information bureaus and vocational guidance centres which help students in career-planning and self-development, but truly speaking, such facilities are not available at most of the places in full-fledged form. There is a great need to strengthen our universities and academic institutions in this respect without any further delay.

With the expansion of education, the employment avenues are gradually decreasing day by day. That is why the government has started self-employment scheme

entailing huge finances and other facilities. Yet, it is often observed that the educated youths are not coming forward according to expectations. With a view to probe in this direction, a few questions were included in the survey schedule. The analysis of responses revealed only 39 per cent opting for such schemes Among them, only one-sixth were capable of managing finances by themselves, the rest (with few exceptions) needed financial loan repayable within the next three years, in suitable instalments. However, 48 per cent of those opted could not name the business or industry they wanted to set up, the rest stated, soap-making, candle-making, printing, general merchandise shops and so on. This slightly reflects not only their ignorance about the government schemes, but also lack of personal drive, self-reliance and necessary efforts to cope with their deplorable conditions of unemployment. As regards estimates of capital, 62 per cent of them quoted between Rs. 500 to Rs 14,999, 16 per cent between Rs. 15,000 to Rs. 29,999, and the remaining to Rs. 30,000 or above One-fourth did not report any problem about the raw material. As for the place, 80 per cent of the total wanted to set up their business in Patna itself And 75 per cent of the total expected income of about Rs. 1,000 per month after six months of the start and 25 per cent estimated between Rs 1,000 and Rs. 3,000 per month. Those who (6 per cent) did not go in for self-employment, were further enquired as to what will they do in the subsequent three months. More than half replied "search for the jobs" Twenty-five per cent said "pursuit toward higher education and competitive examinations", 17 per cent did not state, and the rest said, "typing training", etc.

Unemployed persons, usually 'chronic' ones, develop certain negative attitudes, mental and emotional anxieties, and other abnormal 'symptoms'. Some outspoken people release their emotional tensions and pent-up feelings; others, lacking in frustration-tolerance, appear 'queer' in social settings, and still others (rare in number) are so much frustrated and disgusted that they attempt to suicide or actually end their lives. Consequently, a psychological probe was tried through certain multiple-choice test words The responses revealed over 25 per cent of the total as 'disappointed', 11 per cent as 'disgusted' and 14 per cent as 'quite disturbed' Forty-eight per cent did not mention any of these mental states.

In the end, suggestions and views on the unemployment problem were elicited, to which only 23 per cent responded, 17 per cent blamed the Government, 18 per cent criticized the educational system, and 9 per cent strongly believed in 'favouritism in selection disregarding merits'

Conclusions

As per analysis of responses above, no generalization can be made on the basis of the pilot survey. However, there may be certain indicators as guidelines in sight from different angles

The study was mostly represented by males, matriculates and intermediates, in the age-group of 18-25 years. Three-fourths of the total were approximately registered with the employment exchanges, half of them never got registration renewed, and only ten per cent of them ever got responses. These facts are indicative of little confidence in the employment exchange in providing jobs Forty per cent of the registered employees were ready to accept any job, thirty per cent wanted to be clerk. Most people aspired for salary between Rs 300 and Rs. 600 per month. Home-sickness (immobility) for whatever reasons was a contributive factor for the increasing unemploy-

ment Half of the respondents were prepared to move anywhere on getting the offer.

It is quite interesting to learn that more than half were married, with four or more members as dependents on the fathers/guardians living in the joint family Despite so much unemployment prevalent today, only 39 per cent respondents were ready to accept self-employment scheme, given the necessary resources and facilities But then, half of them could not even name the industry or business Even otherwise also, the majority failed to state their reason of fitness for the jobs they are looking around, thereby indicating their ignorance of employment potentiality or about the possible job requirements. Very few could name soap-making, bakery, candle-business, shop, etc. Thus, it seems they have little idea about the business. This was clear from the respondents' requirements of finance (Rs. 500 to Rs. 14,000) and corresponding monthly income (Rs 1,000 p m. minimum) expected after six months from the proposed industry. Those who did not like to go in for self-employment scheme, reported that they would continue searching job, pursue higher education or appear in competitions in future A few, of course, thought of taking up some training or professional course

With regard to psychological impact on the mental state, half of the respondents did not report anything, one-fourth felt disappointed, and the same number found themselves 'disgusted' or 'quite disturbed' due to their being unemployed

As regards suggestions and views about solving the unemployment problem, the majority criticized the government machinery for its ineffectiveness and the present educational system A few, indeed, believed in "push and pull" for getting jobs

It seems that diversification and vocationalization of the educational system, as also restrictions on higher education, are to be introduced according to scholastic and vocational aptitudes and interests However, this would be impractical without setting up educational-cum-vocational guidance centres in every institution and university so as to provide the students necessary self-awareness to plan their career and equip themselves accordingly well in advance The unwanted mushroom growth of higher level educational institutions will have to be checked Simultaneously, certain concrete steps need be taken for generating more employment avenues through various central and state development plans. The role and manners of functioning by the employment exchanges are also to be revised and enlarged for greater efficiency and speedier results by maintaining regular touch with the prospective employers And lastly, the urgent need of controlling the ever-growing population cannot be over-looked being an indirect aid to reduce the accelerating rate of unemployed people in the coming years □

The Drop-out and Industrial Arts Programme

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THE problem of the drop-out has become an increasingly important issue—one that educators must face Characteristics, currently projected in the literature, on drop-outs are frequently confirmed by individual and group writers, and in the personal histories of those who leave the school before graduation. Some of these major characteristics are those of unhappy family situations, no participation in extra-curricular activities, parents' lack of affection and discipline and academic performance consistently below average. Some of these factors that are noted are not all inclusive nor do they each appear in the background of every student who drops out of schools. However, it is apparent that there is a direct relationship between the prevalence of some of these factors and the chance that the student will drop out The education of any potential drop-out must be a concern of all schools.

This paper will deal with the place of industrial arts in the general education of the drop-out and how this could help the potential drop-out stay in school. Industrial arts must be concerned with the basic problem of transition from school to the work day world In essence, industrial arts is provided to give students an understanding of life and living, just as other subject fields in general education. The servicing of industrially made products and the production of raw materials will be an important function of industrial arts and these should be emphasized as well as the building industry. How does this concept of industrial arts relate to the drop-out ?

The most important single concept which was discovered through research on drop-outs is that "dropping out" is a process which has been regarded as a spontaneous event. However, this is not necessarily so. Although it may be true that a particular disruptive event in the lives of certain young students may make the decision to leave the school appear to happen quickly and impulsively, the probability is rather high that thoughts about dropping out of school might have been developing for a very long time.

It does not just happen overnight. Lucus F. Cervantes thought that development might have begun in the early years of schooling with the resulting self-image becoming increasingly self-defeating until the actual withdrawal occurred. There are drop-outs who remain physically in the school but leave psychologically, and there are those who leave physically Therefore, dropping out results from a process of one's failure as well as the failure of the school to change that process. Providing vocational guidance at the time of school-leaving will be useless, both in impact and range. If any student decides to drop out of school and has set his mind to this, any final attempt to persuade him is likely to be fruitless. Therefore, vocational guidance and industrial arts programmes must be influential throughout the career of any student—male or female, potential drop-out or not. However, since the student who is academically successful receives more benefits and rewards from the present educational system, emphasis should be placed on creating a programme for the drop-out.

The lack of achievement and self-confidence, the sense of not being socially accepted, as Edwin L. Kerr put it, and the sense of not belonging have long been associated with the problem of the drop-out. High school students have not been given any encouragement in some cases, and in other cases their actions might be contributed to over-indulgence. Some families do not provide any type of guidance and counselling to their children and this has a marked effect on the actions of the student. In day-to-day schooling, the student's attitude becomes very defensive and the school day is not pleasant to the student. Studies have revealed that the students take no part in extra-curricular activities and that they do not like the atmosphere of the classroom. The student may develop hatred for the teacher because he scarcely gets help from the teacher with school work or because he was afraid to ask for it. Many of these drop-outs may prefer to work instead of going to school; but very few of them achieve a worthwhile plan because the school has not been helpful Industrial arts teachers and educators believe that the industrial arts curriculum with remedial courses in social studies, English, mathematics will give the students both a feeling of self-confidence, acceptance and above all motivation to want to finish high school.

The areas that are covered in the industrial arts curriculum offer many avenues to overcome some of these problems. Waetjeo thought that the student could upgrade his own image as a learner in working in physical activities. Students can be motivated to learn through industrial arts A student will be aware of the progress he is making on his own project and he will be able to develop the feeling of success and accomplishment The potential drop-out usually has handicap in one of the required academic subjects which have made it difficult for the student to keep pace with his classmates and thus presented a reason for him to leave school.

One approach initiated by industrial arts programmes to help decrease the drop-out rate would be to enroll the students in a general shop (Hepfinger). This type of class is quite different from the regular industrial arts or vocational classes in that most of the students in this class have problems and are identified as potential trouble-makers or drop-outs. Several types of industrial work are offered in the course All types of work are taught by the same instructor who acts also as the counsellor. It is a comprehensive shop, featuring auto repair and bodywork, welding, wood-working and finishing, electricity and other similar trades. Enrollment is limited to eighteen students so that a student

can discover something which interests him or he likes doing Through the instructors' skilful teaching and guidance, the student moves along with the type of project and assignment he is interested in and capable of doing. As the student's project progresses and he gets interested in his work, academic subjects are dealt with in a similar way. Although the student may be antagonistic about book learning, he will be interested in studying as long as this has bearing on the mechanical processes that he is pursuing in the shop.

As the students get involved in their project the teacher steps up the pace of the work. Every student is required to produce something. Hepfinger put it this way: "The student often becomes interested to the extent that he tolerates the rest of his school work or changes his attitude toward it"

Little research has been conducted, that I am aware of, on the impact of industrial arts classes on the potential female drop-out I can understand vocational training improvements in home-economics and business courses, for example—aimed primarily at the girl. However, as Dr K. Clarenback in her paper "Humanizing Career Education" implied, whatever emphasis is placed on improving industrial arts programmes, similar emphasis should be given to eliminating the "boys only" attitude towards industrial arts. I can see this being of special concern to industrial arts programmes in Nigeria

For example, "dropping out" in Nigeria at this time is due more to lack of finances, social peoblems rather than to other factors.

However, as secondary education expands and the standard of living rises, more students of a variety of intellectual capabilities will enter secondary school. When this occurs, we are going to be more concerned with keeping all students in school—male and female. And in a developing country, we definitely need to train in industrial arts. Finally, there should be a change in Nigerian philosophy so that a student is not degraded for taking an industrial arts programme in place of an academic programme

Despite the complexity of personal problems of these students, it is quite clear that no single course of study will solve the problem of the drop-out However, one additional question was raised in mind: How can the facility itself be modified to produce an even better vocational arts programme more suited to the needs of the drop-out? This is a complex problem involving not only the physical facilities such as lighting, heating, etc. but the environmental atmosphere of the entire vocational plant as it relates to the other facilities in the school. It would seem to me that if some of the drab atmosphere surrounding many of the industrial arts classrooms could be modernized and brightened, this in itself may create an enjoyment for learning.

In addition, this may be one means of eliminating the negative attitudes so often associated with industrial arts—i.e. only less intelligent students take these courses

Something must be done to create a learning atmosphere where potential drop-out and successful student can cooperate on an equal basis.

Exciting and creative industrial arts programmes provide a possible avenue of success for the drop-out A new approach to industrial arts can be of best help to the disadvantaged students in formulating decisions as to their future and to their remaining in school. It can give them a start in the direction of their vocational choice. I believe it can give them

a chance for developing self-confidence and abilities they need and a sense of belonging in order to prepare them for a better future.

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A CORRECTION

In the July 1982 issue of *Journal of Indian Education* we had published an article "Inservice Education of Teachers at the Centres of Continuing Education" on page 69. Inadvertently the author's name was published wrongly. The author is J.S. Grewal and not G S. Grewal. The error is regretted.

GENERAL EDITOR

Unfair Means in Examinations

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One can observe a substantial degree of permissiveness in our examinations today Norms of the game are broken with impunity, myriad of malpractices are resorted to and the community looks on as it happens in any permissive society. Present-day examinations do not test what they are intended to test. The grades awarded by the examining bodies are unreliable A grade may sometimes be highly misleading because of widespread foul play in the system. Therefore, there is nothing surprising if some people demand scrapping of the whole system However, as no better measuring tool is available with us, a last bid must be made to control the fast deteriorating situation and improve matters.

WE are all too familiar with the disease of unfair means afflicting the country's examination system If reports appearing in the press, from time to time, are any indicator of the seriousness of this ailment, one led to believe that at least some of the examination centres are dens of juvenile delinquency and adult crime In a study of the undergraduate examinations of 34 Indian universities conducted in 1972-73 (The Management of Examinations 1977), it was found that these universities had registered 10.09 cases of unfair means for every 1,000 candidates who appeared at the examination. Only Visva Bharati University had zero incidence of malpractice in examinations These figures indicate the extent of malpractices only during examinations and not those which take place before or after the examinations—such as leakage of question papers or approaches made to the examiners, etc The study revealed that the index of unfair means was the highest for faculties of arts and humanities and succeedingly less in science and professional faculties. These indices were respectively 11.34, 7.83 and 6.76. Categorizing various types of unfair means into three groups, namely, copying from materials in possession of the examinees, copying with the help of other candidates and miscellaneous cases, it came to light that 66 6 per cent cases came in the first category and 28.3 in the second category. The position at the school stage is possibly no better, if not worse.

Different Technologies

It is feared that during the decade that has gone by, the incidence of malpractices at public examinations has been multiplying by several times Electronic devices and other latest technologies have found their way into this field. Somehow, a question paper is smuggled out of the examination centre during the first few minutes of the commencement of examination and candidates are helped in answering the questions by their answers being announced over a microphone installed at a suitable place outside the examination centre or by other means. At places, unscrupulous element, even among teachers, cyclostyle three or four sets of their answers to questions given in the question paper and distribute the same to the examinees. Different sets of answers are perhaps supposed to make the spotting out of copying more difficult. Some years ago, in a metropolitan city a youngman, while climbing up a ventilator to transmit helping notes to his ward sitting in the examination hall, had a serious fall and lost his life. One cannot estimate the malpractices which are not reported or which go unnoticed in remote areas of the country. Over the years, we have got so much used to hearing incidents of malpractices during examination season that these have ceased to be alarming for us

Major Causes

One wonders if large-scale erosion of values from our body politic or crisis of character in our society has something to do with this malaise. Adoption of unfair means undoubtedly indicates lack of higher values among those who resort to such means. It is utopian to expect honest behaviour from students when an atmosphere of general immoral acts prevails all round in the society. If one were to take a round of the examination centres during examination time, at some places one would come across an incredible situation. The premises of the institution, where examination is being conducted, would be found to be crowded with friends and relatives of the examinees and others from the community This crowd utilizes all measures, threats and minor violence included, to help their kiths and kins taking the examination at the centre. Answers to the questions in the question papers are freely transmitted by the outside crowd to the candidates sitting inside This sort of traffic may be comparatively less at places where the centre suprintendents and invigilators are conscientious. One would feel a genuine need for promulgating section 144 in such like areas to keep the undesirable element away from the examination halls so that those of the suprintendents and invigilators who wish to perform their duty honestly can do so. The presence of a couple of policemen outside each examination centre has also not been found of much avail. Therefore, by way of major therapy to the ailment, the educational institutions should go all out to pay adequate attention to inculcate moral values among students. Promulgation of section 144 or conducting examination under police or military surveillance are crude devices and no answer to the malady.

Some of the teachers have commercialized their profession on a big scale, which may even be called a sort of black-marketing in education This unscrupulous section among the teaching community may be known; but it cannot be easily singled out or 'discriminated against' for purpose of examination work. When some persons from this group are appointed as invigilators, they take care of their 'clients' and resort to helping the examinees rather than functioning as caretakers of the examinations. If some of these invigilators have political support, or back-

ing of the teachers' associations, the situation becomes incorrigible and vested interests have a full and free play.

There is something more also to this disease Present-day Indian society has changed in character It is not agrarian or traditional to the extent it was decades ago. It is fast becoming industrial and modern Not that there is anything wrong in it; but in the process its members are tending to become over-ambitious as well. They also wish to reach the top without patience to do 'sadhna' or 'riyaz' needed for a journey to reach the top Such a situation induces people to stoop to crooked means.

There are two contradictory trends in the present system of education On the one hand we wish to bring all children, and rightly so, to school as against confining education to elites only as was the case till recent past, and on the other hand we are making the school syllabi very heavy and beyond the mental approach of our boys and girls Added to this the loss of teaching time due to multiple reasons and in some cases, apathy of teachers, one feels that the situation has got to be tackled on more than one front.

Examinations are used by educationists and others as an omnibus tool They assess academic achievements of students, provide basis for their classification, rate work done by teachers, help employers to choose their workers, and open up avenues for better matrimonial alliances. Linking examination results with individual's economic and matrimonial prospects are important factors which tempt the intellectually less gifted and less hard-working boys and girls to take to copying in examinations.

Examinations have consistently been criticized for their lack of objectivity, validity and reliability. Lately, some examining boards and universities have been vying with each other in stretching their marking scales so that their products can score better marks than the ones coming out from other boards and universities. This has added yet another dimension to the unreliability of examinations as an adequate measuring instrument. These and several other factors have greatly undermined the value of examinations However, as till now no substitute tool is available to replace the prevailing system of testing, in spite of their notoriety, the supremacy of examinations continues.

Some Measures

One can observe a substantial degree of permissiveness in our examinations today. Norms of the game are broken with impunity, myriad of malpractices are resorted to and the community looks on as it happens in any permissive society. Present-day examinations do not test what they are intended to test. The grades awarded by the examining bodies are unreliable. A grade may sometimes be highly misleading because of widespread foul play in the systems. Therefore, there is nothing surprising if some people demand scrapping of the whole system. However, as there is no better measuring tool available with us, a last bid must be made to control the fast deteriorating situation and improve matters.

In order to reduce chances for malpractice during examinations, several suggestions have been made. It has been proposed that invigilators and superintendents working at examination centres be insured against risks of assaults on them and they be given magisterial powers so that they can perform their supervisory duties fearlessly "During examination days, areas in the vicinity of examination centres should be declared as no entry area for those who are unconnected with examinations. Random sample of candidates be searched each day before the start of question paper to ensure that no one

is in possession of any material intended for his help because material on person of the candidates has been found to be the main source of copying. The last measure is, no doubt, repugnant to one's dignity; but students might cooperate willingly in this regard if it is properly explained to them that such a step would, to a great extent, eliminate chances of students having lesser achievement to their credit excelling them. Nevertheless, one is not too sure of the acceptability of this measure by all students.

Even when all these and other precautions have been taken, the fact remains that malpractices in examinations cannot be eliminated till crisis of character in our body politic continues. Educational institutions must pay due heed to this aspect of student's training Instead of looking for ephemeral gains alone, students should also be enabled to appreciate social, moral and spiritual values If a balanced outlook is developed in students, it would not only eradicate malpractices from examinations, but offer a remedy for many of our social ills as well

There should be a regular scheme in schools and colleges for helping academically weaker students, otherwise any student failing in the examination once or twice can be, more often than not, driven to acts of indiscipline or violence on account of sheer frustration. Syllabi for students must be reviewed and made within the intellectual reach of students

To the extent it is possible to do so, teacher-pupil ratio should de decreased. This would not only ensure better teaching in educational institutions but also help in establishing intimate rapport between teachers and students. One of the factors for the absence of malpractices in Viswa Bharati is possibly the existence of close relationship between teachers and students there. No student in such a situation where teachers and pupils have an intimate relation, would like to fall in the estimation of his or her teachers by being caught resorting to malpractices.

Question papers having more objective-type questions and such other questions as are intended to test the understanding and analytical power of students would also, to a certain extent, reduce the element of copying. Greater emphasis should be placed on writing of papers requiring in-depth study by students and partial assessment of students should be made on the basis of these papers This, coupled with open-book examinations, if this experiment proves successful, would reduce the element of copying at public examinations to a significant degree It may not be insisted that a student must pass an external examination in all the subjects in a single go. A student may be allowed to clear an examination in more than one chance and any subject by units if he so chooses.

For determining economic prospects of an individual less weightage be given to examinations conducted at school and college levels because in their very nature these examinations are a multipurpose type and not specifically designed to select people for any particular set of trades or jobs If universities conduct their own admission tests and at least big employers hold their own tests for selection purposes, students would be much less prone to copying.

If more importance can be attached to work done by students during the year and about 50-50 weightage is given to internal and external assessments, copying at the public examinations would diminish as external examination would then no longer remain the sole determinant of students' future. However, in this process it would be essential to ensure that internal assessment is made more objective

Last but not the least important, it is necessary to lay down the size of 'student

clientele' that an examining board or university should be allowed to cater to Of course, it is difficult to lay down any hard and fast norms for this purpose because one administrator may be able to handle a big organization very successfully, whereas another one may fail even in a small organization. However, keeping a due cushion for variations in individual capabilities, it would be proper to lay down a reasonable optimum size of the examining bodies so that they do not become unwieldy and run a deliberate risk of being mismanaged on account of their large size. A containable number of candidates would also enable the examining bodies to pay attention to work relating to examination reform and other academic matters which too is very much an area of their activity.

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Coaching Institutions in India

A Survey

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IN a bid to fulfil the requirements of the constitutional directive, expansion of full-time educational facilities have been given top priority in the development of education in the country Facilities for part-time education and remedial teaching have not been provided under common school system although stress has been laid for providing such facilities In the absence of such facilities in recognized schools, private agencies have filled in the gap by providing extra coaching to regular students needing additional help and organizing special classes for those who intend to improve their educational level by appearing as private candidates. Such agencies are widely known as tutorial or coaching institutions.

Historical Background

In order to trace the history of coaching institutions in the country, one may have to look back to the time, i c. beginning of the nineteenth century, when the modern system of education was introduced by the Britishers. At that time many private agencies came forward to spread education. Mukerji (1962) mentioned that the Education Despatch of 1854 laid down a detailed policy of educational reconstruction for the future, and stressed the desirability of encouraging private enterprise through a suitable system of grant-in-aid. As such, during the period 1882-1902, unprecedented expansion took place which was mainly contributed by the private agencies.

A large number of such institutions run by the private agencies were not working satisfactorily In view of the unsatisfactory working of such schools, Lord Curzon laid down an educational policy in 1904 under which private enterprises were controlled in a number of ways. Recognition of the institutions by the education departments or by the universities was one among the

controls These recognized institutions provided education only to the regular students preparing for public examinations

Although the provision for candidates to appear privately was available but there was no arrangement for their instruction in the recognized schools. Similarly, there was no special programme for remedial teaching for slow-learners and the under-achievers in these schools This led their parents to engage private tutors During the course of time, the cost of engaging private tutors became prohibitive leading to the system of group-tutors This system gradually began to be organized on commercial lines. Another significant factor contributing towards the growth of such institutions was the migration of lakhs of people from Pakistan at the time of partition It was a difficult task for the country to provide education to all the children of uprooted families in the recognized institutions Moreover, many families having lost their sources of income were not in a position to send their children to school. In view of this situation, some universities and boards of secondary education relaxed the rules for private candidates. This helped many students to work for their living Since there was no arrangement to impart education to such students in the recognized schools on part-time basis, private enterprise sprung up to provide these facilities to students. Such a situation led to the unprecedented expansion of coaching institutions.

Review of Earlier Studies

The coaching institutions are serving a good cause by providing education to those who are otherwise not in a position to acquire education from recognized schools. But these institutions are often criticized by educationists, educational administrators, teachers and parents. According to the Education Commission (1964-66) these institutions do more harm than good. This is mainly due to the fact that they are not recognized by any agency nor do they receive grants and hence are not bound by any norms in terms of competent teachers or adequate physical facilities. Their main objective being to make profit, they do not command the same respect and sanctity that other schools do and they are often called as 'teaching shops' Even with all their malfunctioning these institutions prosper and gain strength

In order to know something about these institutions very little effort has been made so far. Uppal (1958) studied 20 private unrecognized schools of Delhi. The criteria for selecting these schools were. (*i*) more than 50 enrolment in classes IX and X, (*ii*) more than five teachers and (*iii*) must have been in existence for not less than five years He found *inter-alia* that the teachers in these institutions hold no degree or diploma in education Most of them learn on job and are sincere and painstaking. Quality of furniture in the classroom and teaching aids are poorer than those of recognized schools. Later on, a similar study was conducted by Shukla (1964) by selecting 20 coaching institutions in the city of Lucknow. The study highlights that except buildings which are spacious, hygienic and ventilated, physical facilities such as teaching aids, furniture, etc. are not adequate Most of the students attending such institutions belong to middle or poor social class of the society

Saxena *et al.* (1972) conducted a survey of unrecognized institutions offering education at the secondary stage in the twin cities of Hyderabad and Secunderabad on census basis and in Delhi on a sample basis restricting the sample size to just 30 institutions, out of which 29 had responded. They identified 56 institutions in the twin cities of

Hyderabad and Secunderabad, some of them were functioning since 1940 Majority of students (79 per cent) were being prepared for matriculation examination and the rest were for middle, higher secondary and PUC levels. There were 62 per cent boys and 38 per cent girls Majority of the girls (88 per cent) were being prepared for matriculation examinations conducted by Andhra, Aligarh and Osmania universities and boards of secondary education of Andhra Pradesh and Madhya Pradesh Majority of the teachers were working on part-time basis. About 81 per cent of teachers were graduates or postgraduates and 6.5 per cent were below intermediate. In all, there were 36 per cent trained teachers The fee charged per student varied from Rs 10 to 60, depending on the subject and the course of examination Fifteen institutions (26.8 per cent) had library facilities with number of books varying from 11 to 700 In coaching institutions of Delhi 47 and 26.4 per cent of the students were enrolled for matric and intermediate examinations and the rest for middle, higher secondary and PUC examinations. Girls constituted 45.4 per cent of the total enrolment of which 42.6 per cent were for matriculation examination only. In these institutions about 68 per cent of the teachers were working on part-time basis. Out of 142 part-time teachers 66 (46.5 per cent) were working in the recognized schools. About 90 per cent of the teachers were graduates or post-graduates and 5 per cent were below intermediate. Out of the total, about 20 per cent were trained The fee charged per student varied from Rs 6 to 30, depending on the examination The two-thirds of the institutions had reported having library facilities with books ranging from 40 to 2,000. Further, it was found that these institutions not only prepared students for different public examinations but also provided training in developing certain skills (such as of facing an interview board) and preparing them for competitive examinations

The Present Study

As mentioned earlier, coaching institutions serve a good cause by providing education to those who are otherwise not in a position to acquire it from recognized schools. These institutions have been in existence for a pretty long time, but very little is known about them. So far the attempts made to study such institutions were confined to only four cosmopolitan cities of India In fact, the basic data about the number of such institutions, students being benefitted from them and the number of personnel involved in coaching the students in the country are not yet available. The Advisory Committee on the Third All India Educational Survey decided, for the first time, to cover entire educational system with all existing institutions at all stages of all categories to have a comprehensive picture of the total educational system in India. Hence the coaching institutions also formed a part of it It was considered important to collect the information on census basis covering all such institutions as on 31 December 1973, in the country The following were the main objectives of the study .

1. To identify the total number of coaching institutions functioning in rural and urban areas
2. To find out the number of students being benefitted by such institutions.
3. To find out the number of students being coached for different examinations.
4. To find out the total number of personnel involved in teaching in these institutions.

Collection and Tabulation of Data

In order to collect the data on census basis a separate information blank entitled 'coaching institution (CI-8)' was developed. This blank was canvased along with the other information blanks during the Third All India Educational Survey. The data was collected as on 31 December 1973, through the state survey units of the different sates/ union territories. As these institutions were under no obligation to furnish information to any agency, despite the best efforts of the state survey units, there is every likelihood of some institutions not being covered in some of the states For example, although a large number of such institutions are flourishing in Delhi, the state survey unit could not collect information from these institutions. The filled-in forms, duly checked and scrutinized by the state survey units, were collected for further analysis. The data were transferred on punched cards and later on tabulated with the help of a computer in the Survey and Data Processing Unit of the NCERT.

Results

1. Number of coaching institutions. The states of Assam, Bihar, Jammu & Kashmir, Nagaland and Orissa and union territories of Andaman and Nicobar Islands, Arunachal Pradesh and Dadra and Nagar Haveli have reported that there were no coaching institutions In the remaining 16 states and six union territories from which the existence of such institutions was reported, it was found that out of 2,237 such institutions, 1,015 (45.4 per cent) are located in rural areas and 1,222 (54.6 per cent) in ruban areas. Further, it is interesting to note that Kerala alone accounts for 1,358 of these institutions in the country and obviously contributes the largest number of institutions both in rural (967) and urban (391) areas, that is, more than two-thirds (67 per cent) of the total number of institutions in the country. In the states of Gujarat, Madhya Pradesh, Manipur, Meghalaya, Punjab, Tripura and West Bengal and the union territories of Chandigarh and Mizoram, no institutions have been reported in rural areas. Among other states, Andhra Pradesh has reported 28 coaching institutions in rural areas. Coming to urban areas, apart from Kerala, only in Andhra Pradesh and Maharashtra the total number of such institutions exceed 100, they have 163 and 131 institutions, respectively Gujarat (51), Haryana (84), Karnataka (85), Rajasthan (59), Tamil Nadu (98) and Uttar Pradesh (67); each have more than 50 institutions. Among the union territories Chandigarh has 22 such institutions and probably Delhi would have easily surpassed this number in case information had been collected.

2. Number of students benefitted: The number of students benefitted from these institutions are given in Table 1. It may

TABLE 1

STUDENTS ACCORDING TO AREAS AND SEX

Sex/area	*Rural*	*Urban*	*Total*
Boys	48495	107657	156152 (60.5%)
Girls	41664	60170	101834 (39.5%)
Total	90159 (34.9%)	167827 (65.1%)	257986 (100.0%)

be observed that these institutions are catering to 2,57,986 students all over the country. Probably this is a gross underestimate for reasons already mentioned earlier Students from rural institutions constitute 34 9 per cent (90,159) of the total. Similarly, girls constitute 39 5 per cent (1,01,834) of the total enrolment. Again, Kerala alone contributes maximum number of students to the total figure, 1,49,342 (57.8 per cent). Among rural students 87,273 (96.7 per cent) are from Kerala only. Among other states, Andhra Pradesh (12,932), Himachal Pradesh (10,182), Maharashtra (29,555) and Rajasthan (13,619) have reported more than 10,000 students each who receive instruction in these institutions. Thus, around 84.1 per cent (2,15,631) students who avail of this facility are from Andhra Pradesh, Kerala, Himachal Pradesh, Maharashtra and Rajasthan out of the 16 states and six union territories which have reported data for this facility.

3. *Examinations for which the students are prepared:* As mentioned earlier, these institutions prepare students for appearing in different public examinations. Certain students are also enrolled for different individual subjects. This information is summarized in Table 2 Out of 2,57,986 students receiving instruction, 57 per cent (1,47,135) are being tutored for matric or high school examinations and another 21.5 per cent (55,361) are being coached for higher secondary, pre-university or intermediate courses. Out of the remaining 21.7 per cent (55,490) students, 12.7 per cent (33,424) were being coached for middle school examination and the rest 8 6 per cent (22,066) were enrolled for different individual subjects and not for any full examination. Though the boys outnumbered the girls in rural as well as in urban areas, and for all the examinations mentioned above, the proportions of girls in rural areas were consistently higher than that of urban areas.

Further, in order to estimate the extent of contribution made by these coaching institutions vis-a-vis the students enrolled in the regular school system at the same level of education, a comparative picture is presented in Table 3. For the purpose, the students coached for matric or high school examination by the coaching institutions in five states, viz Andhra Pradesh, Himachal Pradesh, Kerala, Maharashtra and Rajasthan

TABLE 2

NUMBER OF STUDENTS EXAMINATION-WISE

Examination	*Rural*		*Urban*		*Total*	
	Girls	*Total*	*Girls*	*Total*	*Girls*	*Total*
Middle	5858	13079	8125	20345	13983	33424 (12.7%)
High School	28915	61944	30374	85191	59289	147135 (57.0%)
Hr. Sec./PUC/ Intermediate	4313	9668	15516	45693	19829	55361 (21.5%)
Individual Subject	2578	5468	6155	16598	8733	22066 (8.6%)
Total	41664	90159	60170	167827	101834	257986 (100%)

(with more than 10,000 students each) are compared with their respective enrolments in Class X as reported in the Third All India Educational Survey—Educational Facilities and Enrolment (School Education), NCERT (1979).

tions The summarized information is presented in Table 4 (page 39) In all, 14,688 teaching personnel were involved in coaching students in these institutions. Of these, less than two-thirds, i.e. 9,088 (61 9 per cent) were working on full-time basis and 5,600

TABLE 3

Country/States	*Students Enrolled in Class X (Regular Schools)*	*Students Coached for High School Examination (Coaching Institutes)*	*Ratio (Per Cent)*
India	2765850	147135	5.32
Andhra Pradesh	195139	6080	3.12
Himachal Pradesh	23363	145	0.62
Kerala	200914	95949	47.16
Maharashtra	297845	17802	5.98
Rajasthan	92800	6336	6.83

It is interesting to note that for the country, the ratio of students coached for high school examination (coaching institutes) and the students enrolled in Class X in the regular school system is 5 to 100 approximately. Similar position is observed in the case of Maharashtra and Rajasthan states where these figures are approximately 6 and 7, respectively. More striking feature is again for Kerala where the ratio is 48 to 100 approximately. From the above, it is observed that the coaching institutions are making a very significant contribution to spread the education.

4 Personnel teaching in these institutions. Here only the number of personnel involved in teaching in these institutions on part-time/full-time basis has been ascertained and no attempt was made to find out their qualifications as it was felt that correct information would not be easy to get on their qualifica-

(38.1 per cent) on part-time basis. Around cent 22.9 per (3,364) were women teachers. Nearly 44 per cent (6,440) of these teaching personnel were working in rural areas. Among the states, Kerala's contribution alone is 9,431 (64 2 per cent) teachers consisting of 6,186 from rural areas and 3,245 in urban areas. Among other states only Andhra Pradesh (1,399) has more than 1,000 teaching personnel and next are Himachal Pradesh (529), Madhya Pradesh (716) and Tamil Nadu (731)

Main Findings

1. In 16 states and six union territories, in all 2,237 coaching institutions were existing on 31 December 1973. Of these institutions, 54.6 per cent were located in urban areas.

2. Among the states, Kerala alone

TABLE 4

PERSONNEL TEACHING IN COACHING INSTITUTIONS

Area	Male		Female		Total	
	Part-time	Total	Part-time	Total	Part-time	Total
Rural	1747	5319	432	1121	2179	6440
Urban	2699	6005	722	2243	3421	8248
Total	4446	11324	1154	3364	5600	14688

accounts for 1,358 institutions, i e. more than two-thirds (67 per cent) of the total institutions in the country. There were 967 institutions in rural and the remaining 391 in the urban areas.

3. In all, 2,57,986 students were benefitted in these coaching institutions. Students from rural institutions constituted 34.9 per cent. Similarly, the girls constituted 39.5 per cent of the total enrolment.

4. Among the states, Kerala had contributed maximum to the total figure, i.e 57.8 per cent. Among rural students 96.7 per cent were from Kerala alone. The other states reporting more than 10,000 enrolment were Andhra Pradesh, Himachal Pradesh, Maharashtra and Rajasthan.

5. Out of the 2,57,986 students, the different courses constitute 12.7, 57.0 and 21.5 per cent for middle, matric and higher secondary/intermediate/pre-university examination, respectively. The remaining 8.6 per cent were enrolled for different individual subjects. Boys outnumbered the girls in all the courses in rural and urban areas.

6. For the country, the ratio of students coached by the coaching institutions for appearing in the high school examination and the students enrolled in Class X in the regular school system is 5 to 100 approximately. This shows that if 100 students are enrolled in Class X by the regular schools, five are separately prepared by the coaching institutes for appearing in the high school examination. The respective figures for Maharashtra and Rajasthan were 6 and 7 for coaching institutes.

7. The above ratio for the State of Kerala was the highest, i.e. 48 to 100 approximately.

8. Out of 14,688 personnel involved in teaching, 38.1 per cent were on part-time basis Around 22 9 per cent were women teachers Nearly 44 per cent of the total were working in rural areas

9. Among states, Kerala's contribution alone is 64.2 per cent teachers to the total. The next other states were Andhra Pradesh, Himachal Pradesh, Madhya Pradesh and Tamil Nadu.

Suggestions

Though the findings of this survey are interesting and revealing, they cannot be considered as final. The two main reasons are

1. The coverage of the coaching institutions cannot be taken as complete as there is every likelihood of some institutions not been covered in some states Further, in spite of the large number of such institutions existing in the Union Territory of Delhi they were not covered in this survey.
2. The exact number of students exclusively enrolled in coaching institu-

tions are not known as some of the students covered in this survey might be enrolled in the regular schools and might be attending the coaching schools only to have better preparation for examination. In spite of the above limitations, the findings of this survey indicate the important role being played by such institutions and they are serving a good cause of education by providing education to a large number of students, who had no opportunity of going to regular schools for one reason or the other. Of course, the quality of instruction in these schools may not be up to the mark, but that was not investigated in this survey.

All-out efforts are being made for universalization of elementary education by making it free for all and providing various incentives to bring and retain children in the schools, Even so, there are students who attend coaching institutes and spend money on high fees charged by them. This phenomenon calls for the detailed study of the type of students who attend such institutions. It may provide some insight into alternative strategies to satisfy the actual needs of such students. This may be possible by studying various aspects of coaching institions and their students in detail on a sample basis.

The most interesting finding of this survey is the highest number of such institutions in Kerala. In fact, the ratio of students in Class X in the regular schools and students prepared for high school examination in the coaching institutes is 100 to 48. Perhaps, the largest number of coaching institutions existing in Kerala may be one of the factors for its highest literacy rate and educational development, in general. Even though there is such a contribution, so far no attempt has been made to collect the data about these institutions in a systematic manner. When educational data are collected on all-India basis excluding these institutions, correct picture is not provided about the number of students getting education in the country. To have an accurate and comprehensive picture of educational efforts being made in the country, there is a need for regular data collection from such institutions. It is of course difficult to collect data from them as they are not under the full control of Education Department. Perhaps, such data collection could be undertaken on census basis, once in five years, from these institutions.

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Something to Look For

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FINDINGS of psychology tell us that human intelligence originates as a general mental ability that is fed by nutrients such as language, computation, cause-and-effect relationship, memorization and appreciation till about the fourteenth year. Hence, a common curriculum is provided for all children up to SSLC so that the multi-dimensional aspect of intelligence is taken cognizance of However, as one ascends the ladder of schooling, somewhere around the age of 10 or 11, one notices an inclination to study, enjoy and profit from one or two related disciplines among his school subjects. It cannot be taken as a crystallized, mature choice based on one's awareness of nature. At best, it can be construed as an act of exploration of one's real interests and aptitudes. These would still be in their incipient stages and perhaps the necessity to study a number of independent disciplines might come in the way of focussing upon a few. By the time a student reaches the school-final stage he would, more or less, have made up his mind whether he should opt for humanities or sciences Here again it remains broad-based for a couple of years, lending scope for further limitation into fields such as English, economics, history, sociology or commerce under humanities, and physics, mathematics, chemistry and biology under sciences. Yet, he has per force to study a constellation of interrelated disciplines notwithstanding his exclusive interest and aptitude in one or two subjects. At this point he realizes he is in a forked-road situation with choices open for professional courses such as engineering, medicine, agriculture and commerce and for general education courses like arts and sciences. In our society, there is a tacit notion that medicine and engineering constitute the apex of professions and, therefore, the best of brains have to gravitate toward that direction. It is true that doctors and engineers play a significant role in society while it is not true that others play an insignificant role.

Let us see the aspirations of the parents for a moment. Parents of children with

above-average intelligence visualize a bright future for their wards either in medicine or engineering. Hence, a good deal of brain-washing is systematically perpetrated on young minds that they should strive hard to realize the parental ambitions. Parents worry over the grades and marks more than the students themselves because any regression in grades is likely to influence adversely their possible entry into these prestigious professions. In this rat-race everyone ignores the natural and spontaneous liking of the youngsters. They are constantly provided to mirror the aims and aspirations of parents rather than pursuing a course of studies they really desire.

What is the basis of the choice of such professional courses? Very few would admit frankly that it assures them a lucrative career, heightened status and possibly a considerable demand in the matrimonial market too ! If the aim is to be imbued with a zeal of Sir M. Visveswaraiah or Dr Rangachari in doing yeomen services to society, zealous youngsters would readily fall in line. But a really brilliant student may have to crush his desire to study pure sciences like theoretical physics or pure mathematics for the simple reason that he is not assured of a secure future. What if an Einstein or a Raman or a Tolstoy never had such designs for a rosy future? Did they plunge themselves into a world of their own and exercise their free-will unfettered by parental designs ? Is it true that everyone who joins an engineering college or a medical college turns out to be a successful engineer or doctor ? The mushrooming of these professional colleges and the extortion of phenomenal capitation fees have polluted the academic climate in our country to such an extent that many bright students regret the choice of their studies midway through the course. Quite a number of them feel that they ought to have exercised their options and opted out of such professional courses. The National Laboratories in our country need fertile brains to conduct researches of far-reaching significance.

Some time ago, we invited an young, bright probationary officer of a nationalized bank to address the students on the employment opportunities in banking services. Basically a man of literature, he was lured by the emoluments and promotional prospects in banking and set for the competitive banking examination. Selected and trained for more than three or four years, he could give a graphic picture of the career opportunities in banks. At the end of the talk he confessed in confidence that he did not really enjoy his work. He felt that his talents and capacities were not put to proper use and that he had to do such an insipid clerical work that would not warrant high academic qualifications. He said he had to stick on purely for the attractive pay and fringe benefits offered. Mind you his placement in a bank is a terrible loss to the academic world. He might have blossomed as an eminent professor and a creative writer too! When all his energies are sucked and sapped in totalling and tallying and signing, he returns home thoroughly exhausted and disgusted. He becomes a cog in the wheel as Bertrand Russell would put it Has he something to look for a life ?

□

Sainik Schools

Perceptions and Reflections

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SAINIK schools 18 in number, one each in every Indian state, are Defence Ministry-sponsored residential boys' schools, designed specially to even-out the imbalance of officer ratio in the armed forces These are vocation-oriented and mainly cater for intelligent boys hailing from economically weeker and socially backward rural families These institutions are affiliated to CBSE, New Delhi. Their objectives are: (*a*) to prepare boys physically, academically and psychologically for entry into NDA, (*b*) to groom them as responsible citizens, and (*c*) to train them for civilian careers, utilitarian to the state that pays for their education (Total expenditure Rs 2 70 crores, staff members with families: 20,000; 2,884 cadets have been sent by Sainik schools to National Defence Academy uptill now)

Achievements

Ideologically and operatively, Sainik schools have anticipated in a modest way the main recommendations of various education commissions which run very close to the objectives of NCC which is compulsory for all our students (classes VI to XII) unlike anywhere else in the state education set-up Their prominent aims are the development of comradeship, leadership, character-building and community service. Comradeship is an art of harmonious living, marked by respect for genuine individual differences within the framework of team spirit and mutual accommodation This is sought to be cultivated through our judicious functioning of the House system and thoughtfully devised daily routine of work and play, rest and recreation, competitions and co-curricular contests Leadership implies self-confidence and ability to inspire trust and obedience by valid personal example, mastery of the subject-matter and a continuing concern for the welfare of colleagues and subordinates entrusted to one's

care. This attribute is inculcated by prudent decentralization of authority in the form of prefectorial system through which the weight of accountability is realized and appreciated by active association with Discipline Committee, Mess Committee and Welfare Committee. Character-formation emerges from the strenuous challenges of self-development, and is acquired on the play-fields through regular supervised games, spirited inter-house tournaments and annual athletic meet and annual day celebration which symbolize disciplined projection of students' physical prowess and social maturity. Students imbibe a healthy spirit of give-and-take in sports contests, and share the thrill of academic inquiry in classroom instruction The excitement and adventure of outdoor excursions and courses like HMI, NCC camps; the confirmation of knowledge through conducted educational tours; the etiquette-bound decorum of eating in a common mess, joyous participation in effectively run clubs and hobbies instil a good measure of self-reliance through specialized competence and a firm commitment to some worthy cause or a course of action, like the service/production-oriented activities under the SUPW scheme, properly implemented and their outcomes periodically recorded. A courageous discharge of assigned duties, supplemented by right wielding of powers and privileges builds up the qualities of firmness, fairness and forthrightness. With suitable combination of punitive and reformative steps in the form of phased, balanced punishments (mainly recreation-denials, but rarely outright expulsions or tortuous inflictions), warnings and reprimands, a sense of positive awareness is stirred; and personal involvement in vital issues and time-bound programmes is secured. Students' attention is diverted habitually to this logical order of loyalties, linked with our Indian heritage and the enthusiasm of secular democracy: loyalty to one's creator, loyalty to one's country, loyalty to one's family, loyalty to one's neighbour and loyalty to one's unit of work/livelihood. Insistence on and identification with these loyalties embody our dominant values and norms They form the fulcrum of our basic initiative and enterprise, and are our distinctive features for personal growth and collective excellence which is convincingly reflected in the 34.6 per cent entrants to NDA via the channel of 18 Sainik schools. The general benefit of our professionally biased teaching/training is equally seen in the superior conduct of our very many students, acquitting themselves admirably in various civilian walks of life. After all, an institution's merit is never wholly gauged by the immediate statistical calculations, but by its long-range, multi-dimensional promise

Suggestions

In order to make the existence and image of Sainik schools more significant and purposeful, the following far-reaching and immediate measures are suggested for quick, determined and uniform implementation.

1. The Board of Governors should have at least two crucial sittings a year to give timely policy direction for pressing financial and infrastructural problems, e.g. raising the quantum of present scholarship amount fixed several years back. The existing ad-hocism and isolation don't tend to promote cohesion, confidence and functional efficiency.

2. There should be a permanent cell to coordinate and supervise the activities and achievements of each school against acknowledged performance indices like the actual NDA entrants each session, the quality/quantity of CBSE results of classes XII and X along with the profile of internal exam results—subject/student-wise, the tone of

discipline and co-curricular excellence This cell should be responsible for monitoring comprehensive school progress item-wise, guide, control and fix the blame for lapses and let-ups—administrative, academic and financial.

3. Outdated service rules, heavily weighted in favour of the employer and smacking of authoritarian flavour should be rationalized (vide Sainik schools in ferment, *Indian Express*, 2.11.1981). Claims of natural justice, right of redressing grievances and its suitable modalities, genuine internal democracy, the scope for representative administration, the provision for medical cover, pensionary and gratuity benefits, etc. are steps long overdue for making Sainik school service not only attractive but also secure.

4 Duality or dichotomy of control between the Sainik schools' society and the state governments generates dilution of responsibility, dispersion of roles, and provokes delays and confusion. Clear-cut demarcation of duties, areas of obligatory sanctions, advisory capacity and recommendatory authority should be definitively set out so that recognized channels of work are respected, and firm accountability for decisions and their implementation can be objectively pinpointed.

5 Since the state governments offer scholarships, they should conduct the all-India entrance examination for entry into Sainik schools. They alone should screen applications for the merit-cum-means scholarship, along with the requisite arrangements for medical examination of successful candidates This vital exercise should be a part of their conscious commitment to the Sainik schools solely built, financed and funded by them.

6 Initial instalment of the scholarship amount should be released to the Sainik schools with the opening of the academic session, along with other agreed consolidated grants for developmental schemes of school expansion and for routine repairs, replacements and renovations.

7 The state governments should be advised to help Sainik schools with subsidized food-stuffs, tax-free canteens, rent-free accommodation for all categories of staff and other allied services like the resources and expertise of the directorates of education which are presently quite aloof and alienated.

8. The local board of administration should be more compact, authoritative and effective. Teachers' representative can be associated with its deliberations and decisions.

9 Budgetory arrangements, head-wise, must be scrupulously screened and minutely checked Any transgression, impropriety, irregularity must be seriously noted and instantly rectified after appropriate admonition to the authorities concerned.

10. Selection grade for masters must be impartially determined in close conformity with the guidelines embodied in Appendix A to the Board of Governors Sainik School Society's letter No. F10 (1)/79/SSC dated March 1981.

11. Sainik school administration should be rule-bound and service-inclined. It must not be a personalized close affair, reflecting ego, animus or arbitrariness which lead to deep discontent, expressed in angry representations and legal wrangles

12 Principal's powers and discretion should be clearly spelled out, and then used skilfully and sympathetically He should be judged by his harmonizing inspiration, personal example of hard work, honesty and awakening of enthusiasm for institutional growth and workers' professional advancement and well-being. Recruitment of staff ought to be criteria-based, and not subjectively manipulated. Penalties and recogni-

tions must be explicitly justified. School income needs to be increased by stopping wastage and exercising strict control over contracts, issuance and consumption of foodstuff and materials from stores through surprise checks and routine inspections. School reserve fund must be carefully drawn on, school resources must be wisely husbanded, clear-cut account must be rendered in proper form, duly audited

13 Conditions of service and work for Class II, III and IV employees should be adequately improved and revised in the light of rising prices, comparing these with the State/Central Government service rules Absence of medical facility and pension are glaring lacunae Work accountability and its regular record, after periodic inspections/ evaluations, must be kept and communicated. Meritorious workers should be encouraged, while the maligner and the mediocre should be alerted and activated. But the obstructionist, the exhibitionist and the saboteur need to be neutralized.

14. Since competition inherently rejects more than selects, the drop-outs of Sainik schools are enormous and depressing. If successful candidates at UPSC examinations and SSB could be absorbed by the government in some lesser order of subordinate services (after mandatory spell of specialized training), the present pathetic state of mass rejections could be alleviated. This alternative absorption would go a long way to justify the vast government expenditure and the long professional training imparted Also this measure is both pragmatic and populist, apart from benefitting the government and the students so sponsored and taught. For this purpose, statutory provision will have to be built in the original bond executed between the principal and the students' parents This step would also effectively answer the persistent query: 'What is the corresponding return of Sainik school education, so heavily funded by the public exchequer?

15. Some consideration for the long training at the Sainik school, backed by government scholarship, can be shown to otherwise qualified students by SSBs for enhancing their chances to get into NDA.

16 Teaching-training schedule at the Sainik schools must be re-organized to focus its thrust on the realization of our specific objectives Unfit students—medically, academically or discipline-wise—must be weeded out promptly. Rejection of the undeserving and the indifferent is as important as the retention of the talented and the interested.

17. Cooperation and harmonious behaviour of the three officers as a team and their business-like relationship with the civilian staff are vitally important for the correct growth of these prestigious institutions which must be run smoothly without any vested interests and aggressive coteries of influence and pressure. Open, aboveboard dealings are the first imperative. Consensus, and not imposition, should be the dictum and condition of work and reform. Normative assessment of personality and performance should be the foremost requirement, and this should be periodically made known for the reference of employees. No hush-hush management, nor should behind the-scene framing' be indulged in.

18. Sainik schools must be well-anchored, suitably funded and progressively updated through proper definition of their administrative, academic and financial commitments. Their role and orientation also need extensive projection and sound perspective so that these schools measure up to society's expectations and their declared goals, commensurate with the expenses incurred.

Conclusion

Sainik school experiment in education

articulates the urge of disciplined learning and living. It feeds systematically NDA, our premier national institute at Khadkvasala, apart from producing enlightened and honourable citizens It supplies credible direction to the military concept of leadership at the grassroot level, and also democratizes educational opportunities, while providing success avenues to the weaker sections of society disregarding the limitations of birth, and socio-economic status. In its stress and slant, Sainik school teaching is imbued with effective nationalism and integration. To the increasing degree the Sainik schools approximate the thrust and content of their training to that of the NDA/IMA policies/programmes, and their popularity and credibility soar in public estimation. The complex of Sainik schools will progressively be counted as a leader (and not a mere follower) among the country's career-based centres of comprehensive education. If the service conditions of its staff are made attractive, if its training schedule is geared to maximize tangible results, if its role and status are rightly appreciated by the state governments through generous grants-in-aid, and if the foregoing suggestions are speedily put through to remove persisting apprehensions and to buttress the morale and efficiency of its functionaries and beneficiaries, i.e the staff and students Let it be recorded that select and selective schools are now under way even in the USSR for nurturing the streak of excellence and for coping up with the pace and volume of change in our fast-moving world of technology. Quality, and not quantum, of progress is the chief guideline of Sainik school contribution. □

Educational News

Seminar on educational journalism

THE Journals Cell of the National Council of Educational Research and Training is organizing a two-day seminar on educational journalism on 28-29 January 1983. The purpose of organizing this seminar is to find out why negative stories in education sell and what are the major difficulties in education PR work The seminar would also examine how special courses in educational journalism could be initiated The major issues and problems proposed to be discussed are :

1. Meaning, nature and scope of educational journalism
2. Educational potentialities of journalism—how effectively are these being exploited
3 Priorities in educational journalism, e g. literacy, massive editorial reforms, etc
4 Status of educational journalism vis-a-vis journalism courses and programmes
5. Educational orientation in journalism, that is, building education-oriented news stories
6 Any other topic pertaining to educational journalism.

Scope of the seminar

1 To find out the type of training the journalists need or have in order to report on education.
2. To investigate the reasons why only a negative story in education sells. This has a direct relationship with the perception of the reporter and also of the editor who buys that story Views from both sides, namely, of the reporters and the editors may be obtained in order to ascertain what is wrong with positive stories.
3. Persons who are engaged in PR work, such as PROs from UGC, Delhi University, IIT, NCERT, etc. are involved in selling stories about their organization. They face certain kinds of difficulties. Hence to find out from them what precisely are those difficulties which they face in making their news acceptable by the newspapers.

4. Next only to defence, education involves maximum number of people either in the form of students, book writers and publishers or as teachers And yet this magnitude of involvement does not appear to be conveyed by any newspaper There is some perfunctory news or which hardly projects the basic problem.
5 Number of universities offered courses in journalism So far, there are no courses in the field of educational journalism Why this has now happened that education could also be considered as part of journalism as such There are specially trained correspondents on military affairs, economic affairs, agricultural affairs, etc. But very few could be called specialists in the area of education who report on education. The lack of proper training among the journalists regarding education is a matter which requires some kind of attention from universities. Professors in the universities may like to react on this point.

Unesco award for Tamil Nadu

IN RECOGNITION of the meritorious efforts of the Directorate of Non-formal and Adult Education, Tamil Nadu, in the direction of removal of illiteracy, UNESCO has awarded the prestigious NADEZHDA K. KRUPSKAYA prize for 1982 to the Directorate of Non-formal and Adult Education, Madras, Tamil Nadu. The award consisting of a medallian, certificate and cash contribution of $ 6868.60 (Rs. 67,565 roughly) was received by Thiru J.A. Ryan, Director of Non-formal and Adult Educationa, Madras on 8 September 1982 at the UNESCO Headquarters, Paris, France, from Dr Amadou-Mahtar. M'Bow, Director General of UNESCO during the International Literacy Day celeberation.

The international Jury having examined the 33 nominations submitted by governments and non-governmental organizations and in compliance with the stipulations and criteria of the general rules has unanimously decided, firstly to award the NADEZHDA K. KRUPSKAYA prize to the Directorate of Non-formal and Adult Education of the State of Tamil Nadu, India for :

1. Conducting with dedication and resourcefulness a massive state-wide literacy campaign, within the framework of the Indian Adult Education Programme, which has already reached over a million participants in Tamil Nadu providing them with training in basic education, vocation skills and an awareness of their civic rights and responsibilities,
2 successfully linking education to development by designing programmes based upon an analysis of prevailing social realities, an understanding of the comprehensive needs of learners and the realization that progress requires awareness of individual rights as a means for promoting more equitable social relationship,
3. mobilizing the full force of government behind the literacy campaign and enlisting the active support of institutions, including universities and research centres, and voluntary organization; and
4. carefully developing the infrastructure required to sustain a massive campaign by providing for the large-scale training of literacy workers, the production of curricula and instructional materials and the provision of specialized assistance for research, monitoring and evaluation.

Adult education in the state

Programmes of adult education are of great importance for the success of the programme of universalization of elementary education as well as for securing intelligent participation of the people in all programmes of national development. The Census of India 1981, places the population of Tamil Nadu at 483 lakhs—males 244 lakhs, females 239 lakhs Though the literacy rate of Tamil Nadu is higher than the all-India figures and the state's 1971 figures, in absolute terms, there are more illiterates than in any previous year. It is estimated that in the age-group 15-35, which is an important segment of population, there are 64 lakhs of illiterates, a vast majority of them—about 40 lakhs—women. Education of these is a stupendous task requiring the concerned efforts of governmental and non-governmental agencies

Though there were schemes of adult education in the past, they were confined to some selected areas and the impact of the scheme was not widely felt. However, in 1976, a separate Department of Non-formal and Adult Education was set up in the state to operate the schemes of non-formal and adult education in a concerted manner with financial assistance from the central and state governments

As a measure of child welfare and with a view to attracting and retaining children in school the Chief Minister of Tamil Nadu has launched the 'free nutritious meal scheme' for children in the age-group 2 to 10 all through the year The benefit of the scheme has already reached 60 lakhs of children and as a result the enrolment in schools has gone up

This success will be followed up with vigour by stepping up the enrolment in the formal school system supplemented by non-formal system of education

Educational project in Latin America should go operational next year

An operation to solve the educational problems of Latin America and the Caribbean by the year 2000 should move into its initial four-year execution stage next year. The interim regional inter-governmental committee for Unesco's major project in education for the area proposed the plan and drafted the statutes of a permanent committee to its carrying out after meeting in Santa Lucia from July 12 to 17.

Main aims of the ambitious Unesco project are to eradicate illiteracy, to provide at least two years' schooling for all children, and to improve the quality and efficiency of education To achieve these aims the committee recommended that the plan of action should be built on national strategies, established or to be set up, through a system of horizontal cooperation among the countries of the region which would take account of the diversity of experience and make offer/demand exchanges possible. Reinforcement of national institutions executing the major project was urged.

Unesco Features □

Book Reviews

Interaction Analysis (Theory and Research)

K.K VASHISHTHA, Mehta Fine Art, Jaipur Road, Ajmer, 1982, pp ix+111. Price not mentioned

ALTHOUGH we are critical of our slackness in adopting innovations in education particularly in teacher education, interaction analysis found a rather quick and important place amongst the techniques used for study of teacher behaviour and has been responsible for many an educational innovations. Flanders wrote "The chances are better than 60 per cent that you will hear someone talking if you are in an elementary or secondary classroom" It is a kind of dialectics which is used by both teacher and pupil at different times and also at different levels. Teacher is not only there for guiding a student but also to learn about the student and that information helps him in making decisions about what to do next in the course of his teaching Similarly, the student is not only learning but he is also providing information to teachers during the course of interaction The present monograph has two sections : the first part deals with concepts of interaction analysis and the second with Flanders' system of interaction analysis (FIAS) Although this system has been most widely used and is one of the most popular techniques for observing classroom interaction, it has less reliability about discrimination and does not describe the totality of the classroom activity It, however, does not involve various essential steps of teaching. It is true that value judgements about teaching behaviours are to be avoided while using interaction analysis but managerial skills could not find appropriate place in various systems. The author of this book has made an attempt to modify this system and has developed his own model named as Regional College of Education, Ajmer system of interaction analysis (RCEASIA). This system has ten categories out of which three have two sections each

Special emphasis has been given to relevance of a particular type of classroom behaviour to be judged by an expert observer with reference to the standard of particular class and desirability of certain classroom behaviours purposive silence has been recognized as a useful and necessary activity. Greenberg (1967) while comparing the work of five researchers in the field, i e Flanders, Hughes, Smith, Taba and Ballach pointed out that these researchers considered teachers as a free controlling agent in the classroom.

Greenberg observed that this assumption is very much open to question, and suggested that classroom should be seen as a total system for study. He advocates a system-oriented approach rather than a teacher-oriented opproach for studying classroom behaviour In this publication, particularly in the developed system of interaction analysis the author has tried to establish its utility in Indian conditions and also tried to assess and develop managerial skills among teachers. Though it has its own limitations, it helps in specifically observing teachers' attempts to motivate the students. On the basis of one study at the M Ed level, the author has established the supremacy of his own system on Flanders' system of interaction analysis and also mentioned that usability of the tool is satisfactory (?)

The second part of the monograph has been devoted to discussion on the recent research component in interaction analysis on the basis of 60 research studies surveyed by the author. However, it is a pity that this book does not review and summarize the outstanding contributions made by researchers abroad One hopes that this book will contribute towards the overall effectiveness of teacher behaviour and would be able to give direction and guidance to the beginners in the field of research in teacher education, more particularly in the field of teacher behaviour It would have been better if the author had taken pains in going through the proofs of the book carefully so that the printing errors were not all that prominent.

N.S BHADAURIA

Some of Our Children : The Early Education of Children with Special Needs

CHAZAN, M. *et al* Open Books Publishing Limited. West Compton House, England, 1980. pp. 260. Price : £ 12.

THE 'concept of handicaps' is related to the current area of educational psychology. These days its study is popular all over the world Literature is rapidly accumulating from careful studies of the incidence and causation of handicaps and their impact on emotional adjustment, personality, growth and development. The problem of handicaps is, therefore, of considerable importance to both professionals and parents and to the psychological development of the child

The book under reference provides a detailed account of the school-going playgroups and home-based handicapped children including their relationship with parents The present publication is based on authors' research project. The book is built up in 12 chapters. Chapter 1 'Introduction' lays down the research procedure and sample for the pilot study of handicapped children. Chapter 2 'Prevalence of early handicap' consists the number and nature of the problems uncovered by the large-scale screening survey which was the first stage in the research programme. There is basic information on the prevalence of handicapping conditions in young children which lies in deciding on an acceptable and agreed definition of the term 'handicap' The third chapter, 'Discovery of handicap' elaborates the discovery of handicap and the Warnock Report (DES 1978). There is also a mention of purpose of screening with considerable emphasis in this chapter. In Chapter 4 'Assessment' the authors have discussed the assessment of handicap with the proper assessment instruments and procedures. Chapter 5 'The parents : Problems and services' focusses on the home environment of the handicaps. The parental interviews with particular attention to those children who were entirely home-based, have also been enumerated.

The sixth chapter 'The contribution of

the play group' presents the special contribution of play-groups to the general well-being of young children Chapter 7 'Special schools and units' gives, firstly, a brief overall picture of the provision of special schools and units for young handicapped children in the two local authorities taken as sample in the research study and then on to discuss how the ten children in the child study sample who were placed in a special school or unit were faring. In Chapter 8 'School before five' the authors have shown the number of handicapped children in ordinary nursery schools and classes and their placement with a suitable sample Chapters 9 and 10 on 'Children with special needs in ordinary schools' point out that young children with problems have the same basic needs as any other young children and that the educational aims relevant to the age-group apply to them also. There is a detailed discussion from a variety of angles regarding what is being done for handicapped children in ordinary schools.

The concluding chapters (11 and 12) attempt to bring the various strands together in the nutshell of the research project and point its implications for future policy and practice. The appendix contains a fairly detailed write-up on the methodology of the study and some of the research instruments designed by the authors. In the present arrangement, the authors have shown tablewise the screening schedules, the child study sample and teachers' opinions to the extent to which special needs were being met. In the end the book contains many valuable references and also the index.

The book is written systematically in a fluent and simple language. The book may equally interest school teachers, psychiatrics, nurses, physicians, social workers, psychologists and para-professionals who work with abnormal children and youth. A knowledge of this research project will be helpful to students in child psychology, personality, abnormal psychology, special education and psychiatry It is an equally important book for those who are involved with young children with special needs and especially by those who influence educational and health policy.

RAMESH K SHARMA

Planning Education for Development (Vols. I-IV)

RUSSELL G. DAVIS (ED) Centre for Studies in Education and Development, Harvard Graduate School of Education, Cambridge, Massachusetts, 1980, pp 421

THE book under review is the second volume in the edited series 'Planning Education for Development'. This volume deals with models and methods for systematic planning of education The treatment of the subject in this volume is spread in five parts divided into 17 chapters.

The text explains various techniques and methodologies which are in vogue for population projection, enrolment projection, manpower planning methods, area planning and school mapping. The techniques and models have been explained with illustrations from the field. In case of manpower planning, the case studies of Chile and The Dominican Republic have been quoted for purpose of illustration. While discussing the projecting project, productivity and employment in the areas of manpower planning in these countries, the text explains both basic as well as alternative methods of manpower planning. The latter method has been used as a case for estimating the demand and supply of the labour force in more realistic manner.

Besides Systems Models, other planning methods like PERT, benefit-cost analysis, heuristic methods have also been explained which could also be applied in the field of educational planning. The treatment of cost-analysis and futurology in this volume is admittedly (by the editors) not in proportion to the importance of these topics in the general field of planning However, the treatment of the subject of educational planning methods shall deserve appreciation from those educational planners who are confronted with such problems in their task. Use of appendices under each chapter and selected bibliography for further references makes the task of readers easy. The educational planners and administrators in the developing countries will find this volume informative, instructive and well documented. The book is also useful to research scholars particularly engaged in the field of educational planning and administration.

V P GARG □

From the Librarian's Desk

Bose, Nemai Sadhan

Racism, Struggle for Equality and Indian Nationalism Calcutta: Firma KLM Pvt. Ltd, 1981, pp. 275.

The book deals with racial aspects of British colonial rule in the Indian subcontinent and its impact on the growth of discontent and political unrest. The study shows that the inability of British administration to remove race distinctions was primarily responsible for the ultimate loss of faith among all classes of Indians in British rule in India Racial discrimination was the only issue which cut across socio-economic and religious barriers and was a master of grave concern to the entire population. It was the single most important cementing force in the rise of Indian nationalism. The author has highlighted the unique importance of racial discrimination, most glaringly evident in the law courts, how it affected the course of political agitations and shaped the political ideas and outlook of the people.

Chaterji, Rakhahari

Unions, Politics and the State. A Study of Indian Labour Politics New Delhi. South Asia Publishers, 1980, pp. 268.

The outhor looks upon labour unions less as movement than an organization and directs itself to the question why the workers' unions fail to exert any voice in the making of policies and decision-making even though they are constantly increasing in number The author has undertaken a thorough organizational analysis of the unions focusing on issues such as their orgnizational goals and efficiency, intra-union factionalism, personal leadership, etc taking political parties and public policies as critical environmental variables. The study which is based on field work conducted in India between late 1973 and early 1975, throws new light on the unions' situation in India but it also marks a definite departure in its analysis of nature of the Indian state and further it calls for revision of some of the basic assumptions of pluralist theory. The book approaches the question of labour unions from a specifically political science standpoint; it looks upon them as organized interest groups operating in an environment shaped by political parties and public policy. Looked that way, one finds that the unions in India are faced with a genuine dilemma: while the economic course of action appears attractive but barren, political action is becoming risky Too much is the power of state against which they have to move.

IBBETSON, DENZIL

Panjab Castes Races, Castes and Tribes of the People of Panjab, New Delhi: Cosmo Publications, 1981, pp 338

THE author gives the pedigrees of the castes, tracing them to whence they sprang and shows what they now remain. Every caste, from the highest standard to the lowest classes of aborigines and outcaste, is reviewed in detail. The author has attempted to give anything like a general survey of the caste and tribes system as it exists in Panjab.

KETTERER, RICHARD F

Consultation and Education in Mental Health. Problems and Prospects London Sage Publications, 1981, pp 245 (*Sage Studies in Community Mental Health*, Vol 3. Edited by RICHARD H PRICE)

THE author traces the history of consultation, education, prevention, and the development of C and E within the CMHC movement His own extensive research on four C and E programmes establishes a framework for assessing and comparing C and E efforts and for describing C and E as an administrative entity These studies also explicate the role of C and E in the CMHC approach. The author examines the state of the art of C and E practice, providing a classification of C and E intervention methods and discussing specific techniques and strategies including viable social action strategies currently beyond the scope of most C and E programmes. The knowledge and skills required for effective service delivery are explored as well as problems involved in managing C and E programmes. The author concludes with a look at the future of C and E programmes. Among his concerns are the needs for new guidelines and standards, for expanded research and development activities, and for a broader community base for C and E and prevention

KLAUSMEIER, HERBERT J. AND SIPPLE, THOMAS S.

Learning and Teaching Concepts: A Strategy for Testing Applications of Theory New York, Academic Press, 1980, pp. 228

THE book presents a theory of cognitive learning and development, a generic model for arranging instruction to provide for differences among students. Applications of theory and the instructional model for teaching the process concepts of science were identified and tested in 13 controlled experiments in two paired sets of schools The research strategy and results of the experiments are reported and discussed in the book. The book has four major features: (*i*) It deals with the basic concepts of science, such as observing, inferring, and predicting. (*ii*) Classroom applications of the theory of cognitive learning and development are identified and tested Similarly, applications of a generic model of arranging instruction to meet individual students entering cognitive behaviours are tested. (*iii*) The research strategy that was employed to test the applications is discussed. Thirteen experiments were conducted and each of these experiments was replicated simultaneously. (*iv*) The applicability of the theory of conceptual learning and development and also the applicability of the generic model to educational settings have been verified.

MCREYNOLDS, PAUL (ED.)

Advances in Psychological Assessment, Vol. 4. San Francisco: Jossey-Bass Publishers, 1978, pp. 597.

THIS is the fourth volme in an on-going series and is an up-to-date survey of key assessment advances in clinical psychology,

motivational psychology, and personology. The contributions written by authorities in the fields, specifically for this volume, inform practitioners and investigators of the many new assessment techniques now available in their areas of specialization, explain refinements and new applications for standard assessment techniques, and provide the broad technical information necessary to determine the adequacy and usefulness of available techniques for particular assessment problems. Each of the first six chapters focuses on the usefulness of a particular assessment instrument or group of instruments The author presents an innovative new techniques for measuring non-verbal communications, two new tests of psychological impact of physical environments, four instruments for evaluating self-actualization, a new inventory for assessing personality variables of normal populations and analyses of special scales of the Minnesota Multiphasic Personality Inventory and of improvisational approaches to assessment The last six chapters shift the perspective to particular clinical and research areas and examine the assessment techniques most useful in each area. It also includes surveys of techniques for measuring assertiveness, self-disclosure, depression, memory disorders, cognitive style, and curiosity.

S D. SINGH AND POTHEN, K.P.

Slum Children of India. New Delhi: Deep & Deep Publications, 1982, pp 110.

THE authors have dealt with the concept, causes and medico-social aspects of the slum, its social composition, the place of slum child in society, the psychological and behavioural problems of slum children, the daily routine of slum children, their health and nutritional status and their education. The book also highlights the responsibility of society toward slum children, the state's role in improving the lot of slum children, and the future of slum children in India

TAIMNI, K.K.

Training and Development of Human Resources in Cooperatives New Delhi Sarin Brothers, 1979, pp 227

THE book presents an integrated strategy for training cooperative employees placed at all levels within a cooperative system, and dwells upon not only the mechanism of identifying training needs and strategy for meeting them but also on issues like developing training material, choosing appropriate training techniques, background of trainers and such other issues as have a close bearing on the effectiveness of training of cooperative employees Only a few developing countries, for instance, have manpower that can really run a marketing and distribution-cum-retailing complex or an agricultural banking system, fewer still have facilities for training and developing the required manpower. Thus entire strategy for developing cooperative system in the third world countries may completely fail, if care is not taken at the same time to train and develop thousands of persons that are needed to run it The success of cooperative system is linked with the speed and efficiency with which facilities are created for providing this essential input.

TOPPO, SITA

Dynamics of Educational Development in Tribal India. New Delhi Classical Publications, 1979, pp. 288.

THE author has attempted to understand the

approach to analyse the role of traditional youth dormitories, the so-called indigenous educational centres, with that of schools, colleges and modern teaching methods. Since education has an intrinsic relation with culture, the need for an anthropological approach to the education in tribal areas has been highlighted. The present study evolves an educational anthropology with conceptual facts and processes. In short, the book throws light on levels of educational development among the tribals of Chotanagpur.

K.L LUTHRA □

Just published

Fourth All India Educational Survey

Price
Rs. 99; $ 30; £ 10 00

THE NCERT has brought out the present feature as a result of a survey conducted as on 30.9.1978 covering all recognized schools from primary upwards to junior colleges. It contains wealth of information regarding the availability of schools in rural habitations covering all types of rural population, management of schools, enrolment of children in rural/urban areas, etc. A salient feature of the survey is the information about the availability of educational facilities in all habitations predominantly populated by the Scheduled Castes and Scheduled Tribes, enrolment among these communities and number of teachers belonging to these communities. The present publication contains a comparison between the third All India Educational Survey (31 12 73) and the present survey (30 9.1978)

Contact : **The Business Manager**
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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices/ policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Research and the Classroom

TIME and again a question is posed to the educationists : What is the impact of research of classroom teaching? While the spirit of asking this question is undeniably just, the tone needs to be a bit mild and informed. It is like asking a question : We gave you ten rupees to buy goods and services what did you bring us back? Very relevant question, indeed ! But the answer is very small tangible materials. Perhaps we tend to forget that research in education is not comparable to industrial research or medical research. If industrial research has a few centuries old history and the medical research history as old as the civilization itself—the same cannot be said of education. The history of educational research is of very recent origin It has neither been of fundamental type nor has it covered much of methodological ground. We merely know by now that classroom behaviour is largely dependent on its setting and social climate. We also know that classroom behaviour is dependent on the school climate as such which in turn means administrative climate. We have learnt to analyse social skills of students and a bit about how does one learn or tire of learning. A few studies do tell us about the learning patterns of the first generation learners In fact, we are still gathering information about the numerous aspects of classroom behaviour and trying which of the methods are successful either in a formal or non-formal situation We have yet to finalize whether or not to make a definitive recommendation in this regard.

In a fluid situation like ours, and with lack of definite information the impact on research in a common classroom is difficult to assess. But surely experiments are on in various fields and departments of education. The textbooks have improved—their printing , get-up, etc. are positively better than what they once were. Teachers are getting better orientation to teaching than before and the

administrator is willing to listen to the research. All that has happened, therefore, is that situation *has* improved and an infrastructure exists to mediate between the research and the actual practitioner. Perhaps a lot more needs to be done in this direction but with patience the bleak prospects shall not remain all that bleak after all.

January 1983 GENERAL EDITOR □

Indianization of Education and Philosophy

A Critique

W.A. SIDDIQUI
Lecturer, Regional College of Education, Ajmer

IN THE sphere of education today our academicians are striving hard after clarifying, specifying and even justifying the concept of 'Indianization'. If somebody, out of curiosity, asks : Is the concept of Indianization not very similar to the notion of what we already know as 'aculturation', 'enculturation', or 'resuscitation' ? The answer is normally given in negation : "No, this is something different from what we usually mean by these terms."

Then, what does exactly 'Indianization' mean ? There are as many conflicting and perplexing answers and explanations to this question as there are specialists in the field. In the opinion of some modernists, "Indianization is nothing but a 'fad', or a 'catchword' that has, however, been imported in the educational spheres from political circles and represents a typical characteristic mode of expression." Others, who matter in some socio-political arena, would say that "it is more or less an eulogistic term used for emitting our intense nationalistic feelings." Another group of specialists, while taking cue from a line of eminent Indian thinkers and reformers such as Sri Aurobindo, R.N. Tagore, Mahatma Gandhi, J.L. Nehru, Dr. Radhakrishnan, Dr. Iqbal and many others, exert that 'Indianization' is not any new term. This has been emphasized for long by our national leaders. And, in uttering such exhortative phrases, the purpose of our great leaders was mainly to inspire the entire nation to confide in and have a reverence for old traditions, habits, customs and culture of India.

While analysing the concept of 'Indianization', another problem is often raised that 'Indianization' (according to the propounders of this theory) is not to be equated with the term 'nationalism' or 'nationalization', although the nationalistic feeling or the spirit of patriotism tacitly works there. 'Indianization', according to its proponents, exphasizes what is *characteristically Indian* in its nature and form. Thus, from these assertions, one may logically draw the following conclusions,

1. That, Indianization is an activity of resuscitation which believes emphatically in reviving the old culture, customs and traditions of India.
2. That, Indianization adheres to discriminating what is 'really Indian' in its purest form from what is 'un-Indian'.
3. That, Indianization as a process may be applied to any situation which needs to be *Indianized*. May be it is a political, social, psychological, or exclusively an educational one.

Thus, in its literal meaning, the concept of 'Indianization' along with its main objectives (stated above) culminates in the theory of 'revivalism' or regression. Indianization, as opposed to the theory of liberalism and universalization, believes in the philosophy of conservatism. And, thus, with this meaning and clarification in mind, the term Indianization may further be studied in the speeches and writings of our great national, political and social leaders. Although they made a vigorous use of this term, at the same time they differed in its interpretations on the basis of their differing philosophical views. Certainly, when Gandhiji, Jawaharlal Nehru or Dr. Radhakrishnan spoke about 'Indianization" they never meant *the same Indianization* what commonly we have been hearing from the modern revivalists of our time. (The author is often scared when he beholds that a great number of academicians are making use of this term without any prior serious thought.) On this very thesis, the author, therefore, asserts, that Indianization now ought to be considered mainly from two philosophical viewpoints : (*i*) Indianization—the Gandhian-way, and (*ii*) Indianization—from the revivalists' point of view.

I would, now, due to my own logical reasons, prefer to base my further discussion in this paper in the light of *the Gandhian way of Indianization;* for I understand that whatever our country needs in the name of Indianization today, that is *a liberal and progressive Indian outlook emanated in our glorified past* (as we see in a country like Japan). The idea is further elaborated in the words of Dr. Radhakrishnan :

> For a nation to grow the people must have a knowledge of having worked together in the past and the will to work together in the future..... National feeling is sustained by the love of the land in which we live, the historical traditions we inherit and the hope for a common future. We remember the past, are alive to the present and work for the future.[1]

Thus, the impact of the Gandhian way of Indianization may be seen later in the prolific writings, in the thought and actions of our intellectuals and academicians who embraced the Gandhian outlook and carried his great mission in the length and breadth of this vast country. To name a few : Dr. Zakir Husain, K.G. Saiyidain, Humayun Kabir, Shriman Narain, and many others have, time and again, impressed the Gandhian philosophy upon every aspect of our Indian life. Prof. K.G. Saiyidain, while considering the programme of national reconstruction and tacitly discussing the problem of Indianization, elucidiates[2] :

> This is, in fact, the inspiration of our entire programme of national reconstruction...In dealing with this problem we have to reckon with the pull of opposing forces of revivalism and modernism, which operate in every sphere of our life. In this battle we have to adopt a critical, rather than a

[1]S. Radhakrishnan, *The Present Crisis in Faith*, 110, Hind Pocket Books, Delhi.

[2]K.G. Saiyidain, *Education, Culture and the Social Order*, Chap. 5, Asia Publishing House, 1958

doctrinaire approach to both, with greater emphasis on the capacity to meet the new challenges. There are some valuable elements of our cultural heritage which we must guard and cherish with solicitude but we should also have the resolute courage to discard whatever is reactionary or obscurantist and stands in the way of our going forward.

In the opinion of the author, thus, and the views upheld by our distinguished thinkers, such expressions as 'Indianization', 'Hindustanization', 'Nationalization' or 'Modernization' should be used and employed in a guarded manner. Particularly, in education, which is characteristically an *abstract process* of human development, a universal concept of knowledge expressions like 'Indianization' or, so to say, 'Hindustanization', seem neither desirable nor logical. What we actually mean, when we intend to speak such terms, is to impress upon our countrymen that we no longer want to work under the situations which are altogether of different origin, not belonging to this land, and whose roots are lying somewhere in alien countries. Certainly, such a view is amendable. We must be proud of what our country has cherished in the past and 'work together for the future'. But never in a way that all becomes a mockery. Let us now take up the specific problem of Indianization of teacher education.

Indianization and New Teacher Education Curriculum

While the process of Indianization is at all levels of education being pondered upon, the teacher education in our country can no more be an exception, or remain in 'isolation'. It is, after all, the teachers who are our nation-builders and without their shouldering responsibility with the rest of nation, neither can education be Indianized nor the educands. So, with this educational commitment to the nation, our top educationists, academicians, and experts in the field of teacher education engaged themselves in discussing this issue at large. Experts in the field came forward with a plethora of literature on chiselling the grand educational model and make it *truly Indian*. Thus, the courses and curricula of teacher education were reviewed and revised. The contents of the courses have either been altogether changed or 'Indianized'.

It may not be out of place to mention here that, presently, a great deal of reformative work in the sphere of teacher education has been proposed by the National Council for Teacher Education. The NCTE in its preamble of the report on *Teacher Education Curriculum* observes[3]: "The existing system appears to be static and rigid to cope up with the new national goals. It provides the student-teacher very little awareness of the role education can play in transforming the present Indian society into a truly democratic, socialist and secular society that we wish to build up in this country" In such a manner the Council expresses its allegiance to the national goals in general and the corresponding 'new goals' for teacher education in particular. But, no where, in its framework, the NCTE has used or highlighted the phrase, 'Indianization', as it is now, time and again, being used and emphasized by several educationists (Recently, some authors have come up with such interpretations in the leading Indian educational journals.)

Undoubtedly, the role of the NCTE is commendable in so far as it has brought considerable changes in reconstituting the curriculum for a new programme of

[3] *Teacher Education Curriculum: A Framework*, Para 1-2, NCERT, 1978

teacher education in the country. This may be further stressed that while making such proposals in its framework, the major and most important objective before the NCTE was to produce *a unique model* of teacher education at the national level—a model which may partly look 'task-oriented', and partly scholastic but mainly to suit "the changed political and socio-economic situation in the country."

But, the sad aspect of this whole exercise was that while revising and reconstituting the 'philosophical and sociological foundation' segment (A popular foundation course of education offered at B Ed. and M.Ed. in our teacher training colleges), the specialists of this particular working group of the NCTE, failed to produce a better model. Whether did the widespread spectre of 'Indianization' or 'modernization' not allow them to think seriously over this valuable content, or just for fear of schism they threw out the philosophical segment, and, thus, renamed it as 'Teacher and education in the emerging Indian society'.

In the light the above observations, the author now wishes to offer his comments categorically, viz. (*i*) the course (philosophical and sociological) which has now been renamed and short-formed as TEIS, and (*ii*) the views expressed by some educationists appraising and interpreting this particular new course with an emphasis on 'Indianization'. This is as follows :

1. The very title of the course 'teacher and education in the emerging Indian society', does itself not represent a complete and comprehensive picture of the whole content The title at first sight seems to be a topic or sub-unit of any larger unit. Moreover, the short form of this course TEIS, as inscribed by some educators, ridicules the whole seriousness of this subject-matter Some of us, out of their creative humour, may prefer to spell and pronounce it as 'TEASE'.
2. Coming to the contents specific of this course, one does not take much time to discern that either there is too much repetition of the same topics or the short topics distributed under 'modules' and 'practicum' almost carry the similar problems related to 'society' or 'community' In the name of philosophy probably the course makers have made a very indiscreet use of such terms, as 'concept of good life', 'values and aspirations', 'democratic social order', 'Indianization', 'national development', 'equality of educational opportunities', 'better life', and so on.

Obviously, one can say at a glance that this newly designed course is *for anything* but not for philosophy, nor even leading to a course of foundation of education This author has certainly not been unmindful of this fact that such a course should not be conducive to the emerging Indian situation, or that it should be unnecessarily loaded with uninteresting and irrelevant theoretical and philosophical postulates, nor does he oppose the idea of 'Indianization', 'modernization' or 'functionalism' in education. What is, in fact, urgently felt here philosophy being the most wanted segment of a teacher education programme has not been given due cognizance in the new curriculum for teachers.

When the author makes a critical evaluation of this *newly proposed content* it is found that experts of this particular working group have probably done away with the course of philosophy in education just because of their *craze for Indianization*! Here the acclaiming words of Seshadri are interesting to note:

> By denying a separate status for philosophy of education as a discipline the

> NCTE has done great service to putting an end to the miscellaneous exhortatory talk about education that is currently being paddled as philosophy of education and thereby opening avenues for fresh thinking on the *Indianization of education courses.*[4]

Thus a very few pertinent questions come up: Why did we not think of bringing any *improvement* in the existing segment of philosophy of education course which has long been in practice in our teacher training colleges? Why did we overlook the fact that units of study containing philosophical topics in this course were dealt by those immature teacher-educators who could not even spell the word 'philosophy' correctly Last but not the least, why did we not realize that the study of a philosophic discipline at the level of Bachelor and Master of Education was an added experience to our prospective teachers to *think critically* and encounter numerous educational problems *reflectively.*

Probably the experts of the working group might be having well-worded answers in defense of their arguments. But a unanimous thinking of a large number of insightful teacher-educators in the country is this that the new course content replaced by the practising foundation course of philosophy of education conveys nothing but to gathering facts and information about present day Indian society or community. If, however, the objective in the proposed course was to give high weightage to the prevailing Indian socio-economic conditions, then, according to some educators, this could have been done otherwise, by giving at least 50 per cent weightage to philosophic content as we have been having in the present syllabus. But the author of the article 'Indianization of philosophy of education', who is after justifying and trying to impress upon his readers that the NCTE's new course in reference is an 'Indianized course of philosophy', or say, that this has potentiality to *be Indianized in such a manner*, creates a lot of confusion and chaos in the minds of those who know clearly what these concepts, 'Indianization', 'education' and 'philosophy' mean and are all about.

Can Philosophy of Education be Indianized?

In the light of this overall view about Indianization, its meaning and philosophy, the NTCE's proposed curriculum for teacher education and its newly designed courses known as TEIS, we will now pointedly discuss how far were justified in saying that concepts like 'philosophy' and 'education' can be Indianized or, for that matter, 'philosophy of education' can be so Indianized As, recently, some such disparaging efforts have been made to popularize the idea of 'Indianization of philosophy of education'. In this connection Seshadri pleads the case of Indianization of philosophy of education in the following manner:

> Indianization of this subject (philosophy of education) is to be conceived on the lines of *what the National Council for Teacher Education (NCTE) has said* on this subject in connection with psychology. On this view Indianization of philosophy of education should mean not a refusal to take the due note of the *critical and analytical method of modern philosophy* which has had a *world-wide influence* on issues which arise in the distinctly Indian social and cultural context in just the same way as Indianization of science.[5]

Seshadri, thus, instead of making his objectives clear as *what* specifically he means by 'Indianization' and *how* philosophy of education can be Indianized, makes several contradictory assertions in the above statement and

[4] C. Seshadri, Indianization of Philosophy of Education, *Journal of Indian Education*, VII, 1. May 1981

[5] ibid.

amalgamates the whole issue. His first view that Indianization of philosophy of education is to be "conceived on the lines of what the NCTE has suggested in regard to a course of educational *psychology*" admonishes in other words, that whatever the NCTE has done in Indianizing the new course of psychology will also be justified in a course of philosophy, irrespective of this fact that both these disciplines differ much in so far as their *educational objectives* are concerned. Moreover, this type of admonition is nothing more than a *forecast*, since both these new courses are yet to be 'tried out' in our teacher training colleges.

Further, Seshadri has suggested in his article referred to above that in Indianizing the philosophy of education, we must not forget to take refuge in the "critical and analytical method of modern philosophy which has a world-wide influence", and so on. This, to my mind, is another way of *de-Indianizing* things what in the name of Indianization we wish to do. If we are looking toward Western countries for *their method, their approach* in dealing with our 'philosophy of education' then how we can be certain in not teaching our students *their ideas, their philosophy*. Probably, Seshadri is oblivious of the great labours made by our ancient and modern philosophers in the field of analysis-synthesis or logic. Thus, Seshadri, who is pleading with the "analytical method of modern philosophy" because it "has a worldwide influence," or it may be helpful in Indianizing our course of philosophy, has made an ill-advised statement which is rather uncalled for in our present context.

Conversely, we should stress, now, that whatever devices and methods we have discovered or can discover from our own cherished past, we must revive and apply them wisely to meet the challenges of the present. I never mean here that for sake of Indianization we should reject whatever seems alien or foreign to this country. We should rather welcome the new vistas of human knowledge and wisdom, and discoveries made in other parts of the world But, at the same time, we should safeguard ourselves not to be *too dependent* upon that this country does not belong to, or forgetting what already in abundance is here. Let us, now, before considering the case of 'philosophy of education' properly, make a brief assessment of the words *education* and *philosophy* in their barest possible forms.

Education, as said earlier, being necessarily a universal concept, a process of human development, a central concept of knowledge, neither it is Indian nor American. It is only a *system* that discriminates between Indian and American, Japanese and Chinese education. Thus, on this logical ground it would be absurd on our part if we ignore completely the very characteristics of this universal process of education and go on fighting for a thing which in reality does not exist. What, in fact, may be Indianized or pass through the process of Indianization that is the *educational system* of this country and *not education in itself*.

Similarly, *philosophy* like science, as most of my colleagues would agree, is an *activity of finding truth in the cosmos*. It is a universal *search for reality*. Thus, in its barest possible form, a philosophic or a *scientific phenomenon* can never be distinguished as Indian or Western. It is, in fact, a philosophical and scientific *system* which may be either 'Indian' or 'Western' or be labelled as 'Vedic' or 'Gandhian'. To quote the words of a great Indian patriot, Lala Lajpat Rai : "Truth is neither local nor national nor even international. It is simply truth"[6]. Further, while cautioning his countrymen against the growing orthodox tendency and narrow outlook,

[6]Lala Lajpat Rai, What Do We Mean by National Education? Publications Division, GOI, 1966

he asks : "Are we going to reject the science and philosophy of the Western scientists and philosophers, because the discoverers of these sciences and writers of the book on philosophy happened to be non-Indian" ? Thus, with this clarification in mind about the broad concepts of 'education' and 'philosophy', we should further investigate whether 'philosophy of education' can be Indianized.

'Philosophy of education', so long as this phrase happens to be a combination of two broad independent concepts like 'philosophy' and 'education', cannot be Indianized Philosophy of education, as some authors have mistakenly understood it, is never *a commodity which can be exchanged, transformed or converted as and when one wishes to do so. Philosophy of education like its attributing factors is universal in its characteristics and adheres to an analytical treatment of the problems and processes of education* Thus in their etymological meanings, as these words stand for, neither 'education' nor 'philosophy', nor even 'philosophy of education' can be Indianized.

I am not against the idea of Indianization, nor do I wish to see that a course of philosophy of education ought not to reflect the rich aspects of our Indian culture and thought. I would rather love to have all this and more in philosophy, in education. But certainly, not in a manner as it is haphazardly being done today. Further, I am also aware that this impassionate analytical exposition and the bare facts put here may be highly disappointing, particularly, to those who are after 'Indianization of philosophy of education'. But the facts remain facts, they cannot be hidden or masked just because of one's own liking for a certain thing and disliking for the other. Thus with this view of the 'philosophy of education' in mind, let us ratiocinate for a rationale whereby the Indianization of a course of philosophy of education could be suitably possible.

Indianization of Philosophy of Education Course

Without any over-simplification of the facts, we can further stress that whatever has so far been thought of by our educationists in terms of 'Indianization of philosophy of education' this must now be directed toward Indianization of a *course of philosophy of education* As discussed earlier, neither 'education', nor 'philosophy' nor 'philosophy of education' can be Indianized. It is only *an approach, a system, a method,* or *a course which can pass through any present mould.* Thus, to Indianize a course of philosophy of education would, in other words, mean to Indianize our own contents as we wish to put it in a syllabus. Secondly, the *method or approach* with which we shall be able to impart the knowledge of the content to our learners in a manner that we deem fit In this connection probably, the author[7] of an article 'Philosophy of education : An Indian approach', seems to be much closer to sense the under-discussion problem in its right perspective Although, the view expressed in the above article has been vehemently criticized by Seshadri in his article 'Indianization of philosophy of education' in the following words : ' Indianization of philosophy of education does not mean a working out of the aims, curriculum and methodology of education based on classical, metaphysical, epistemological and axiological concepts and theories as *has been suggested in a recent article* on the subject." However, Seth, while agreeing with the former author's point of view, would say that Indianization of philosophy of education necessarily means all that what she in a modest way has stressed in her article.

As a matter of fact, efforts of this and other similar nature have been carried out by

[7]Kirti Devi Seth, Philosophy of education : An Indian approach, *Indian Educational Review*, 13, 1, Jan. 1978

experienced educators in the past, to have a balanced content containing philosophical and sociological units in the foundation course of education (such a course is at present in practice in our teacher training colleges). But, however, results of this whole valuable exercise could not attain a country-wide appreciation. Not because the course was ill-contended, ill-conceived and imbalanced, or our course makers were oblivious of the quantum and quality, but because the course came into the hands of those who neither did appreciate the content, nor could they employ any desirable and insightful technique or approach by which this valuable exercise may prove to be a lively and successful venture.

In contrast to this view, thus, to allege (some authors in their recent articles have unsuccessfully tried to probe) that our present course of philosophy failed to be 'functional', 'progressive' and conducive to the 'present-day socio-economic conditions of our country', or, as Seshadri remarks, because of "adding on a new 'ism' or school while leaving the course itself intact and unchanged", and so on. Such allegations are baseless, and in fact, reflect the incomplacent and adverse attitude of these authors toward this subject in view.

Conclusion

While summing up, it would suffice to say that unless the problems and issues concerning education are taken in their right perspectives, nothing fruitful can come. In case of 'Indianization of philosophy of education', the author has presented a detailed discussion to prove that neither would it be desirable nor possible in a way as this has been visualized by some of our sensitive authors. 'Indianization of philosophy of education' is only then possible *when significant portions of Indian philosophy are given their due place in a course of philosophy of education* And, the teacher-educators who would teach this subject are sufficiently *oriented* toward adopting *suitable approach or approaches* to impart the wisdom and knowledge of this subject. With these words the author feels obliged but apologetic, too, to his friends whose views, due to utmost academic urgency, have been included in this article for criticism or appreciation.

Finally, what, in fact, now in the name of Indianization is largely needed that is a *faith in our country's glorified past*, and with this faith we go ahead in exploring new vistas of human knowledge and wisdom which, indeed, are more important today than even our material and scientific advancements. And, thus, we proudly can say: This is *our India, this is our wisdom, and this is our educational system.* □

Gandhian Thoughts on Basic Education

Relevance and Development

M.L. KAUL

THE purely literary education with English as medium of instruction introduced by the colonial government in India was designed to provide clerks for the government, prepare people for white-collar jobs rather than to stimulate skills and increase the productivity of native people. Gandhiji rightly foresaw that such a system of education not only isolated the educated from the masses and created class distinction but what was worse, it made education a powerful vehicle for exploitation of uneducated villagers. In those days, the ancient village organization—its political, economic and social system—was being destroyed by the Britishers. Goods manufactured abroad were being dumped in the villages. The life of the villagers was utterly disorganized. Having lost their occupations they felt helpless while sinking steadily into poverty, unemployment and despair. The educated were interested only in their self-advancement and did not bother about the poor. Further, English education did the least to remove social evils like untouchability, casteism, communalism, hypocrisy, tyranny, etc. which were increasing day by day. In Gandhiji's (1950) words :

> The present system of primary education was devised by the foreign government without any thought of the economic advancement of the country. It only brings into painful relief the pathetic superstition that we cannot carry on the affairs of India, except through men with English degrees or possessing a knowledge of English.

In a sense the "education given by the foreign government was necessarily life destroying" (Gandhiji 1950).

Gandhiji strongly believed that the only way of saving the nation was to relate education to village needs to revive the economic life of villagers. He thought that the education should be based on rural needs. The child should be trained to become a producer. The education should be self-supporting where intellect and heart are trained as much as the

hands. Instead of education being academic and in foreign tongue, it should be imparted in mother tongue, improving the productivity of the student through development of handicrafts and relating education to real day-to-day life needs of rural folk. It is through these ideas that Gandhiji hoped to revive the economic and cultural life of the nation and develop a new system of education. There was one more important factor which led Gandhiji to advocate education through medium of handicrafts. In a labour surplus country he was against large-scale factory manufacturing and wanted to base economic life on small-scale village production. He developed the philosophy of basic education or new education, Nai Talim, which would be imparted to all.

By education Gandhiji meant "an all round drawing out of the best in child and man, body, mind and spirit" (Sinclair 1975-76). He believed that literacy is not the end of education nor even the beginning of education. It is only one of the means whereby men and women can be educated. In this educational philosophy, labour formed an integral part of daily life of the child and adult alike. The entire ideology of basic education is rooted in the quest for physical labour, non-violence and love for freedom for the lowest and the lost. Gandhiji said :

> I hold that true education of the intellect can only come through a proper exercise and training of the body organs like hands, feet, eyes, ears, nose, etc. In other words an intelligent use of the bodily organs in a child provides the best and the quickest way of developing his intellect, mind and body together (Sinclair 1975-76).

The concept of basic education was not by any means borrowed from western educational thinkers, it was rather found on ancient values of work, truth, *Ahimsa* (non-violence) and applied to individual and social needs. Gandhiji offered it as his last and the best contribution for the creation of a new social order of his conception. The philosophy of basic education was advocated by Gandhiji after testing it for full thirty years and putting it to actual practice in small groups.

The Nai Talim in the opinion of Gandhiji should lead to the following results :

> Our sense of frustration would give place to hope; our penury and starvation to a sufficiency of means to maintain ourselves; unemployment to industry and work; discord to concord It should enable our sons and daughters to learn to read and write and know along with it a craft through they will acquire knowledge (Gandhi 1950).

The philosophy of basic education was thus grown out of the atmosphere pervading the country in its villages. It was designed in response to the needs and aspiration of the inhabitants in India's villages. The immediate aims of basic education included the following :

- —to restore and enhance the quality of life in the villages of India
- —to provide the rural people with low-cost technologies which would make them economically self-sufficient and ensure even the poorest familly a meal
- —to improve health through dietary reform, sanitation, etc.
- —to eradicate the evils of untouchability, casteism, communalism and to restore purity of spirit to religion and religious festivals.

Gandhiji believed that orthodox education both alienated young people from the life and work of their local community and tended also to render them physically unfit. And again literacy, i.e. learning of books, acquisi-

tion of intellectual knowledge and useful manual work in various crafts are not different though they may seem so

Basic education is meant to generate in the country a right atmosphere for productive work. It is meant to transform children into model villagers. It develops both the body and the mind of the child. It is self-supporting, as the child learns a craft to a sufficient degree of skill that he can support himself by his earnings. All basic school pupils would like to do some agriculture as main or subsidiary and would thereby learn improved agricultural techniques They should, thus, obtain their general education through a craft-centred curriculum To quote Gandhiji (1950):

> The new scheme is claimed to be based on sound economics, for all education will be through the medium of a craft. It is not education plus training in a craft, but it is all education by means of a craft.

Progress of Basic Education (1938-1976)

Gandhiji conceived education as an instrument of social reconstruction in totality—politically, economically, morally and spiritually. The programme of basic education was launched for the first time in 1937-38. Gandhi's twin concerns were to bring elementary education to all the villages and to avoid unfortunate situation where educated youths come to despise manual work and were sometimes pysically ill-prepared for it. The basic education was essentially a child-centred education evolving the principles of learning by doing and earning while learning. It related education with the life of the child and the community and stressed the importance of inculcating moral values of truth and Ahimsa.

The scheme of basic education as outlined by Gandhi was discussed at length by the eminent educationists at the Wardha conference on 22 and 23 October 1973 Appreciating the far-reaching potentials and impact of the scheme, the conference entrusted the task of preparing curriculum and developing a National Basic Education Scheme to a committee headed by Dr Zakir Hussain. The committee prepared a report on National Basic Education which was accepted by the Congress in March 1938. The first institution of basic education, the Vidya Mandir Training School was opened in nearby Wardha in April 1938. Unfortunately in 1940, the Congress ministries resigned and in the following years on account of mass arrest of basic education workers, a number of basic institutions were closed down. With the return of Congress ministries in 1946, the basic education programme was again taken up with vigour. But again with the death of Mahatma Gandhi the implementation of basic education scheme received a severe blow. The values and aspiration of pre-independence period were suddenly forsaken. After independence, there was a sharp change in the perception of people and the socio-economic and political realities strongly favoured the maintenance of status quo Gandhian educational thought received a mere lip-sympathy from the statesmen, educationists and planners. Even some staunch supporters of Gandhi felt that "basic education was the education which was good for the children of the other people." It is, therefore, no wonder that the emphasis on basic education kept on waning in successive five year plans.

It may be noted that initially in the First Five Year Plan, the Planning Commission placed a strong emphasis on the basic education. It recommended establishment of eight-year full-fledged basic schools with the necessary provision for adequate land, initial equipment and other capital expenditure. It also stressed that opening of ordinary primary schools should be kept to a minimum How-

ever, the progress by the end of the First Five Year Plan was very slow. The number of basic schools increased from mere 1,751 in 1951-52 to 10,000 by 1955-56 By the end of the Second Plan this number increased to 38,400 In the Third Plan a two-fold policy of orienting all schools towards the basic model and slowly converting more schools to a full basic model was adopted. The plan provided for the conversion of about 58,000 ordinary schools to basic schools. No progress figures in this respect are available In the subsequent annual plans, Fourth and Fifth Plans, there is no mention of basic education programme. What happened to the rate of basic education is, thus, anybody's guess. In the Fourth and Fifth Plans, the emphasis on free and universal primary education, elimination of wastage and work-orientation of the curriculum has been laid down.

Implementation Problems

There are no two opinions amongst the educationists about the soundness, efficacy and suitability of basic education programme in developing countries. In fact, the educationists like Dewey considers the system of basic education developed by Gandhiji as one step ahead of all the educational systems of all times. Yet the system met a death-blow in the very land of its origin. Some of the main factors responsible for this may be enumerated as under.

(*i*) In the post-independence period the necessary political support required for implementing the programme was completely lacking. One may identify two groups of politicians who though shared strong support for the basic education programme, yet allowed it to meet its natural death. The first group of politicians consisted of those who were somehow interested in the basic education programme, developed a guilty conscience towards the whole spirit of Gandhiji because of their own acts of omission and commission. The second group of politicians included hypocrites who propagated the ideas of Gandhiji without any understanding In public they posed themselves as the ardent followers of Gandhiji just with the purpose of making a political capital for themselves.[1]

(*ii*) It appears that at no stage serious thinking was given by educational planners and administrators to implement the basic education scheme in its totality. The approach followed by them has been fragmentary and half-hearted without proper follow-up, resulting in the self-defeating of the purpose and the failure of the entire scheme.

(*iii*) The stress on heavy industry and science based on western-oriented modern techniques in the sphere of agriculture and industrial sector in the Five Year Plans discouraged the promotion of local technology and indigenous skills which were key components in the basic school education which aimed at increasing local skills and productivity. Gandhiji's model of education was based on the principles of village autonomy and self-sufficiency whereas our planners followed a different strategy of growth which heightened the differences between urban and rural areas and instead of digging out these disparities it created a strong bias in favour of urban living.

(*iv*) The basic schools, wherever developed, were limited to primary stage only. Some states merely changed the names of primary schools as basic primary schools without changing the course contents, method of teaching, etc. The new institutions were seldom provided with requisite equipment, raw materials and trained teachers. Even in Gujarat where Gandhi's values and basic

[1] B S Goel, *Educational thought in contemporary India*

education was rooted more firmly than anywhere else, the basic schools suffered from a number of deficiencies. One of the surveys conducted by the NCERT in late sixties observed that in Maharashtra most of the institutions were not well-equipped with regard to staff, accommodation, raw materials and other equipment. Only 50 per cent of the institutions were reported to have trained qualified staff 23 per cent had sufficient raw material, 26.6 per cent had adequate accommodation and 32.3 per cent of these had adequate equipment (Sinclair 1975-76)

(*v*) Gandhiji's concept of basic education was a kind of life-long education as he aptly said that the Nai Talim would extend "from the moment of the conception to the hour of death " In his scheme of Nai Talim, pre-basic, post-basic and adult education formed an integral part of the educational process He never meant to confine basic education to primary education only. It was unfortunate that the educational planners and administrators interpreted the basic education as a kind of primary education only. It was, therefore, natural that the parents who were interested in giving their children higher education, developed a strong apathy towards basic education The basic schools were considered inferior to ordinary primary schools and the students from these schools received a second-class status. The basic education became prematured terminal one and those who opted for these schools found it difficult to seek admission to higher education They also faced difficulties in securing jobs in modern sector.

(*vi*) The sudden death of Gandhiji in 1948 also contributed to the neglect of much-needed action of support to basic education by the educationists, politicians and the public. Gandhiji would have resolved the growing second-class status accorded to basic educated students in respect of access to higher studies and employment. He would have turned the tables and seen that the students of basic schools received priority in the matter of access to higher education as well as to employment as compared to students of ordinary schools. In fact, this called for a radical change in attitudes and institutions and structure relating to education making higher education institutions the context of courses, etc. functional rather than certificating institutions It also called for a total change in the attitudes and preferences of employers as they need not go by pure academic qualifications and certificates of the candidates but by their relevant training necessary for specific jobs.

(*vii*) Until 1976, education, particularly the elementary education, was a state subject. The states followed different approaches towards educational development which was more influenced by the demands of privileged sections of population rather than the masses. It is, therefore, no wonder that educational system in the post-independence era continued to further the interest of privileged classes and it did not cater to the requirements of weaker sections. Gandhiji's philosophy of basic education was for masses in which people from all walks of life should have access to minimum learning needs ensuring healthy development of mind, body and the soul together.

Conclusions

It has been unfortunate that the National Scheme of Basic Education was never given a fair trial in the country. In the early years of independence, it was implemented in a half-hearted manner. The basic schools mostly existed in names only and the curriculum methods of teaching followed in these schools were devoid of the basic philosophy, content and spirit of Gandhi's views on education. There are no two opinions about the fact that the system of basic education as conceived by Mahatma Gandhi and later on developed by

the national educationists was sound and the only way for social and economic upliftment and emancipation of rural masses and socially and economically deprived classes. The whole teaching technology required for imparting basic education was inexpensive, indigenous and the teaching contents were essentially relevant and catered to the social needs.

No doubt, the success of the programme calls for a total support from politicians, administrators, planners, educators and community-parents and peer groups, etc. Gandhiji's philosophy of basic education was revolutionary one and it could have been implemented only by taking radical steps and following a total approach. There are instances where the scheme achieved grand success when followed in totality. For instance at Jilia in Mehsana district, the Gandhi Asharm Trust started seven basic high schools and 35 basic primary schools for a group of 28 villages set up on a government waste-land. Adopting a functional time-table, an integrated approach to education, the schools were free from the obnoxious problem of wastage, drop-outs and stagnation. The pass percentage of the students in the school was as high as 80 to 90 per cent which doubled the percentage of pass-outs for the state as a whole The students helped in bringing out over one hundred acres of land under irrigation. One is impressed by the simple living and high thinking of the villages there. The entire Ashram represents a successful example of Gandhiji's rural reconstruction programme through education which is worth trying.

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A Case for Social Philosophy of Education

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MOST accepted areas of study in philosophy, viz. moral philosophy, political philosophy, linguistic philosophy, analytic philosophy, etc. have been seem to have some bearing on educational philosophy. However, with some rather rare exceptions, philosophers of education have generally neglected the area of social philosophy in their work. The literature is strangely silent on social philosophy and professional associations seem not to include 'social philosophy' in their proceedings. Today, teachers seem to have no social philosophy upon which to rest their practice. The primary emphasis of teachers' preparation programme has been upon addressing the needs of the individual child. This seems to have swung their attention away from social concerns.

Even in the field of philosophy, social philosophy seems not to have caught on Mendel who argues that the philosopher has historically been thought to be aloof from the affairs of society. He writes :

> In all ages, there has been a tendency to emphasize the dubious or misty role of the philosopher in relation to society in general. It does very much seem as if the philosopher had not such deep roots in the world as the average man, even if it is no longer possible for him to detach himself from the world in the fashion of a pure contemplative, withdrawn to a hermit's solitude.[1]

Philosophers, though very much members of society have often been regarded as having nothing to contribute to the understanding of social affairs. This is not so. A philosopher needs to be detached from the mainstream of society and its affairs in order to be able to look at it objectively. This seems to have put him and his 'social' philosophy on the exterior of the mainstream of life, putting it on the back seat. The philosophy of social science

[1]Gabriel Mendel, *Man against society*, Henry Reguery Co., Chicago, p. 103 1962,

seems to have taken the front seat. Rudner[2] sets forth the notion that social philosophy is less worthwhile an endeavour than the philosophy of social science. Social philosophy, he maintains, focusses upon alternative views of desirable social systems or societies, whereas, philosophy of social science does not. Social philosophers are noted for their efforts to argue in favour of a particular social system. Rudner cites Plato's *Republic* as the paradigm case of social philosophy at work. To this book may be added Hobber's *Lecialthen*, Locke's writings on governments, Rousseau's *Social Contract* and the writings of Marx, Marxists, socialists and non-socialists (Rudner, pp 2 and 3).

Rudner goes on to stress that social philosophy has been "more overtly normative" than philosophy of social science. This is to say that while philosophers of social science deal with normative matters, they lack the strong strains of advocacy that marks social philosophers. In addition, the problems dealt with by the two philosophers are different. While social philosophy is concerned to deal with substantive issues (e.g. the worth of a particular social system), philosophy of social science looks to methods (e.g. the logic of theory construction, testing theories, etc.). We are led to believe that for these reasons we ought to study philosophy of social science rather than social philosophy (Rudner pp. 3 to 5).

Another factor that may have contributed to the relegation of social philosophy to the background may be the rise of positivism and linguistic philosophy. In these movements, the individual human and his language became focal, society was dealt with as a function of human discourse. Thus, the emphasis upon reform, innovation or transformation of actual concrete social states of affairs was nullified by inquiry into the investigation into the 'talk about' such matters.

Social philosophy was not always so neglected. In an era when all academic philosophers seemed to be ignoring concepts of culture and society, John Dewey seems to have formulated quite a substantial philosophy of education. The core of this position is to be found in five writings most of which were written between World War I and II. *Democracy and Education* (1916), *The Public and its Problems* (1927), *Individualism Old and New* (1930), *Liberalism and Social Action* (1935), *and Freedom and Culture* (1939).

Social philosophy is found scattered throughout Dewey's writings, though no systematic efforts seems to have been made to collect it under the canopy of social philosophy. Dewey's writings are temporally contextual and he speaks of 'democracy' and 'individual freedom' and 'liberalism' in differing connotations in different writings. No attempt seems to have been made by him to set forth a final solution for society's ills. His concern was for a development of appropriate attitudes toward social life and toward inquiry. His contribution is in focussing upon the raising of questions before solutions can be found. Dewey seems to have reacted to classifical and contemporary political and social philosophers rather than enacting his own scenarios. He rejected the traditional monistic, absolutistic and idealistic social philosophies of Kent, Hegel, Locke and Hobbes. From these critical views, perhaps, his social philosophy can be constructed.

Dewey warned of the effects of World War II. He saw it breeding a consciousness of the fact that America was lacking "an integrated social sense and policy for our country as a whole, irrespective of class and sections". His solution for this aimlessness was to be a new form of nationalism. Here he attempted to reconstruct the idea of nationalism so as to stress compatibility with the diverse

[2]Richard Rudner, *Philosophy of social science*, Prentice Hall, Englewood Cliffs, N.J., 1966

cultural strains in America. Dewey placed the school at the forefront of this socio-cultural unification. It was the task of the school to teach youth for this new nationalism.

Throughout Dewey's philosophy we see a response to the actual conditions American democracy faced in the early nineties. The problems that he addressed (immigration, industrialization, urbanization, economic depressions, etc.) were characteristic of the times. He was a true social philosopher of education owing to the fact that he saw education playing a central role in framing the social problems and markably of means for their solution.

Social philosophy of education, if such an area can be marked would be a fruitful area of study. It could answer questions pertaining to some of the areas of the realm of values, the concept of human nature and the concept of the socio-cultural. Such an area of study would be concerned with the normative dimension (i.e. the recommended state of affairs) and would focus on education as it relates to the social and normative. What we would be after in social philosophy of education is some intellectual moves which would scrutinize educators to the role of values, conceptions of human nature, and socio-cultural as they might function in a social setting. Whereas traditional philosophy of education deals with such matters, it is from the standpoint of the generalized individual and not society.

Social philosophy of education ought to display the fundamental role values play in shaping social life. Schmmacher observed: All human activity is a striving after something thought of as good[3]. The 'goods' of various societies have differed.

Viewed from a sociological and historical standpoint this variation provides an expanding knowledge base that proves fascinating. Thus, one of the first goals of a social philosophy of education would be to describe alternative values in a variety of social contexts.

But, mere description is not philosophy. It is important to analyse such value positions comparatively Such an analysis implies evaluation It would entail evaluating values cross-culturally over time. Educators would need to make judgements, based on philosophically approved procedures, relative to the various values found operating in societies around the world. For instance, viewed from the educational perspective the interest is one of interrogating the role of enculturation and socialization relative to values. How does education function in the values process? How should values be instilled in human beings? What is the worthwhileness of prevailing institutional settings as they seek to inculcate values in youth? The focus being the social rather than the individual and the efforts would be to distinguish a single or personalistic view from a social standard or maxim

Another area of enquiry social philosophy would help in is human nature. Beneath energy effort for the improvement of society is to found a conception of human nature. Alternative conceptions of human nature frequently underwrite educational methods, theories and philosophies This is related in position taken by thinkers and educationists. Those, for instance, who take issue with radical behaviourism do so, often, because they are disenchanted with the views of human nature that are assumed in this position. It is possible to locate various categories of definitions of human nature influenced by the culture context or by the ethos of an age The 'biological' man, the 'psychological' man, the 'theological' man, the 'mechanistic' man, the 'nuptic' man are all conceptions which

[3]E.F. Schummacher, *Small is beautiful*, Harper and Row, N.Y., p. 95, 1973

are manifestations of a culture and time.

Social philosophy of education may also aid in exploring the societal arrangement. It would deal focally with the kinds of education that are compatible with alternative societal arrangements as well as the function of education in bringing such alternative structure into play. Sociological analyses make a good study of the aforesaid but do not include prescriptions or recommendations of the kind social philosophy could provide. For instance, while the concern with schooling as a type of educational operation has been historically and empirically studied, its ill-effects and benefits revealed and alternatives suggested, no value syndrome has been adopted to make pronouncements for the future. Social philosophy would help here.

Further, in the study of the culture concept what culture components ought to be made part of the curriculum is a philosophic question, what knowledge is of most worth and what knowledge is appropriate for institutions of society to attempt to teach.

In this article the attempt has been at tentative mapping of areas in education which could benefit from social philosophy. These remarks are first efforts, further refinements and more study could reveal the contents of such a domain of inquiry in more detail. These seem, however, to be evidence enough for the pursuit of social philosophy of education, a viable part of the general field of philosophy of education. □

Value-based Education

V. S. MATHUR

EDUCATION is perhaps the oldest and the most important social activity since the inception of man and the blessed have been those who have had the privilege of looking after the all-round development of the young. With the passage of time both the quantum of knowledge and the number of seekers of knowledge has gone up and today education is recognized as the birth-right of every child born in modern society. Our constitution emphasizes the need for equal educational opportunities for all. This naturally has resulted in a race between quantity and quality and unfortunately quality has been the loser. The impact of this phenomenon where quality in education has been the worst sufferer, has been tragic and today we find ourselves in the midst of a national crisis mainly perpetuated by the crisis of character. There has been an utter absence of any value-based education in our institutions as well as in our homes and in our other social institutions. All moral and social values have been debased.

Excellence

If education is accepted as the lever of all national progress, we must expeditiously evolve programmes and projects that should boost up 'excellence' and help improve the situation in which the nation finds itself today. India has a long tradition of good educational philosophy. Our history and our culture are manifest with deep philosophy as expressed in our old scriptures and in the writings of our great sages. Even nearer our own times we have had the privilege of benefitting from the rich and deep thoughts given by sages like Mahatma Gandhi, Vivekanand and Shri Aurobindo. These good things, however, seem to have passed into oblivion and we find ourselves amidst a mad and reckless race for sheer material gains throwing all decency to winds.

No doubt a lot of lip-sympathy and some resources have gone into the so-called development of Indian education, we seem to be drifting away from rather than getting nearer the cherished goals. The present system

education (it can hardly be called a system) which came to us 150 years ago through extraneous imposition, has little to contribute towards the correct orientation, as the experience of the last 35 years of independence has shown. Introduced with the narrow aim of preparing some people for the junior government jobs in the administration, it should have been abandoned and a new national system evolved based on our present needs and on our future aspirations. What we have is simply a rehash of what had been existing through the years. Simple and useless arithmetical re-adjustments, tinkering with syllabi and textbooks and above all a wholesale importation of foreign models seem to characterize our educational programmes after independence. Another erroneous and wasteful idea that only imposing structures can house good education, has been responsible for the erection of highly imposing and luxurious 'monuments' specially in our places of higher learning at exhorbitant cost, while other more important sectors of education like primary education, have been denied even the minimum facilities. The single-teacher primary school is a disgrace to any nation.

Looking Back

To my mind the best strategy can be to look back over the pages of our cultural history and to dig out the wholesome and the best to weave into a worthwhile programme of national education with firm roots in the native soil. There has been no dearth of ideas and ideals in education in our country and our history is replete with admirable programmes taken in hand by our old 'Gurus' through the years. We have only to recapture the spirit behind some of them and bring about a fusion between the old and the new. In fact the new can best emerge only out of the old, and certainly not in isolation.

The Gurukul

Of the many systems followed in India at the various stages by our saints and sages, the Gurukul system seems to have a lot of potential to enrich the modern concept of true and good education. I feel that this is one system which can provide strong and valuable foundations for a worthwhile programme of Indian education needed so much by the ailing millions.

The word 'Gurukul' combines two significant words, i.e. 'Guru' meaning the teacher and 'Kul' meaning the family of the home, denoting thereby that a school or an educational group can best serve the purpose of education if it takes the shape of a family presided over by the teacher. This spirit of belonging to a group or an institution is vital to the process of real learning. Perhaps the original ideal may not be possible to have in that measure in our present circumstances but certainly, an attempt could always be made to gradually, but surely towards a situation where many of our institutions at all levels may be residential. In any case the environment in an educational group needs to be oriented towards the Gurukul orientation and there should be a deeper rapport and stronger bonds of affection between the teachers and the taught.

The Five Concepts

In order to recapture the Gurukul spirit, we have to understand the five basic concepts. The Guru was not an intellectual of the highest degree but he looked upon his assignment as a mission of faith and love. He led a life of 'voluntary poverty'. And their main concern in life was learning and teaching. The teacher today is a very different individual and, therefore, the first requisite is to inculcate in our teachers and would-be teachers the high ideal of service and creation

notwithstanding their claim to better material comforts.

Then there was the principle to have an unostentatious atmosphere specially during the learning years of an individual's life. The present craze for expensive education defeats the very spirit of common brotherhood amongst the students and the teachers and has sadly brought about some sort of caste system. Knowledge should be within the easy reach of every child of the nation, without putting any undue burden on the parents. This will mean a complete reversion of our present policies where money seems to be the most important multiple Every individual potential has to find a fruitful soil for its nourishment and growth, and above all for bringing about a proper mental attitude. A teacher should not exercise any distinction between his pupils just as a father or a mother treats all their children alike and usually pays more attention to the weaker ones.

The atmosphere in an institution has to be such that the children forget their castes and the social position of their parents in the sacred precincts of the school. It was, therefore, very relevant that in a Gurukul all children lived alike, dressed alike and spent their days alike. It was perhaps due to this atmosphere that our history seems to be full of examples of friendship between the rich and the poor. The proverbial friendship between Lord Krishna and Sudama is a shining example of the spirit that prevailed in a Gurukul. The equality of opportunity and treatment are basic for the proper development of a child's mental, emotional and spiritual potential.

Another characteristic of the Gurukul system which we can imbibe is the idea of 'Tapasya' meaning 'endurance' and 'hardihood'. Life in a Gurukul was 'hard' and the basic idea was that it is through fire that pure gold emerges. A person to whom hard work and sacrifice are play-things, never look helpless and frustrated in later life under any circumstances, and his love for others can never diminish. Hard work is a great equalizer. If the development of virtues is our aim then luxury is a bad teacher. The Sanskrit word for student was 'Brahmachari', i.e. a person who leads a life pure and simple without any temptations. In such an elevating atmosphere the present phenomenon of students' rebellion and violence would become a thing of the past If a student's life becomes synonymous with 'Tapasya' which a famous psychologist has described as 'systematic and heroic asceticism', the emerging end-product should be pure, heroic and worthwhile.

Character Motivation

Character is the greatest saviour of destiny and it was, therefore, natural that a lot of stress was laid on character-building in the Gurukul system. All education led to the building up of character. The entire atmosphere in a Gurukul was oriented to this high aim. The futility of mere literacy was accepted and education was synonymous not with literacy and examination scores, but with the development of personality. It was more possible to achieve this aim in a Gurukul because it was of a purely residential nature. However, what can we do today is that students spend longer hours than hitherto in the fruitful company of their teachers and their colleagues and the school ceases to remain a five-hour affair. Education should, in the main, aim at the development of a complete man, body, mind and spirit.

It is very interesting to note that training in sex which is completely taboo today in our institutions, formed an important part of the Gurukul system. The teacher or the Acharya as he was called then, took upon himself to understand and solve the problems of a pupil's sexual life and as a result the child did not develop any inhibitions or any com-

plexes Such an orientation in sex is very necessary to develop tight attitudes for the proper direction of the sexual instinct

Epilogue

With these basic multiples in the background, we could initiate the child into the three R's and acquisition of knowledge and skills with greater success and depth. In the beginning of the present century, an attempt was made to revive the old Gurukul system. Some such institutions were opened in the different parts of the country. But for want of sincere workers and due to the indifference of the foreign government, most of these either languished or relapsed into routine institutions.

Today the need for good education has become even more pressing than before. Modern science and technology have thrown up more problems than they have solved. The craze of brute materialism seems to be eclipsing everything that is noble and sacred in human personality. And to me the only remedy lies in the evolution and practice of an educational system which finds its roots in the very fundamentals of human life and in the national soil. Only such a system of education can radiate happiness and mental contentment.

The present renewed emphasis on moral education is, therefore, not only relevant but very timely. However, there is a danger of move relapsing into a gimmic and a mere slogan. The orientation has to be made an integral part of education at all levels of growth and fused into the educational process in a subtle manner. There seems to be, however, no relevance in making out separate syllabi and separate books on moral education as is being done at many centres of education today. The whole programme, both inside and outside the classroom, has to be properly oriented. □

A Quest for Values in Education

H.B. MAJUMDER

INDIA today is passing through a great crisis of character in almost all spheres of life. Never in our history has there been a greater need for value-oriented education than today. Over-emphasis on formal education directed towards acquisition of knowledge and passing of examinations for economic gains, with little or no attention to value formation as an integral part of the educational process, is responsible for the present critical situation. The essential function of education for developing the integral man, by drawing out the best in him, body, mind and spirit, for social living in a society, free from all kinds of exploitation and injustice, has been lost sight of at all stages of education. Social living in this age, which is marked by tremendous scientific and technological advancement, has resulted in an explosion of aspirations for achieving material goals. These in their turn have brought about a corresponding decline in human, moral, spiritual and ethical values. Material advancement has also brought about tensions, conflicts, competition, social distances, alienation and rivalries. These are nothing but manifestations of violence of one form or the other.

The present system of education has enabled man to control the external forces of nature and improve the conditions of his meterial exrstence to some extent, but in spite of these spectacular scientific and technological achievements man is not happy today. He is a victim of negative passions like hatred, racialism, violence and jealousy. In the midst of material prosperity that technology has given there is a sense of frustration and insecurity leading to tremendous exploitations which has resulted in deprivation and poverty amongst the masses.

It is politics which determines the pattern of social life today. Indeed, politics cannot be separated from life. But fundamentally the political problem is a problem of character. A critical study of history and contemporary social problems and issues reveals that man is at the centre of all political and social problems and his character is the product of education that he receives in the institutions and his interaction with the environment in which his education takes place. Both the institutions and the environment are control-

led and influenced by political forces and pressures Then again, man who is the monarch of the external world, is a slave of his own inner world of emotions and passions. In the modern man there seems to be no harmony between the outer life of his actions and his inner life of emotions This loss of harmony results in loss of character and consequent erosion of values in social, economic, religious and moral spheres of his life. The task of value-oriented education is, therefore, to bring about this harmony between exterior self and inner self and to keep it out of the clutches of so-called politics.

Swami Vivekananda wanted a synthesis of the sciences of the west and spirituality of the east. The Education Commission in 1966 reiterated the same approach : "If science and Ahimsa join together in creative synthesis of belief and action, mankind will attain a new level of purposefulness, prosperity and spiritual insight". We have utterly failed to bring about this harmony of science and technology with Ahimsa or non-violence. In non-violence lies the spirit of India, for there cannot be any non-violence without love for mankind. Some people may argue by saying that human nature is innately aggressive and, therefore, non-violence is a myth. But does not education offer a possibility of controlling aggressive behaviour of man by developing properly an inner regulatory mechanism so that, irrespective of the theory regarding the innate versus the acquired nature of aggression, one can have some hope for mankind? In a value-based system of education another task of education, therefore, is to generate love for mankind by bringing out synthesis between knowing, doing and feeling, by coordinating and integrating the use of head, hand and heart in the educative process

The story of our modern age is steeped in discord, conflict and fear. The power released by science can destory mankind unless human relationships are guided by spiritual, social and moral values Science gives us power, but we need values of life, like love, compassion, and regard for mankind in order to use that power the welfare of self as well as of mankind.

It is increasingly being realized that mere intellectual power and productive capacity to produce wealth for removal of poverty are not enough to promote *social welfare*. Centralization of knowledge as well as of material wealth leads to exploitation of mankind, and exploitation is violence and is inhuman. Our young people should not only know facts of life, or facts of science or facts of culture but should develop a desire to let others know. They should know not only to possess or to produce but should develop an attitude to give, and give with Sraddha, as Swamiji wanted, "wanting nothing in return". Our young people should inculcate Sraddha, regard for self as well as for the human race. He wants us to cultivate the heart, "because through the heart the Lord speaks". That means develop Ahimsa, develop love. Swamiji says, "Love opens the most impossible gate". If that is done there will be no violence. If education fails to help in the proccess of such a cultivation, what education is that? Education devoid of such values is no education. In order to cultivate love, you need not only to feel, but to act with feeling at the same time. The task of education is to generate love for mankind.

One of the powers that education gives is the capacity for decision-making—making correct decision at the correct moment. Every individual has to make decisions in his personal and social life. Correct decision making needs development of abilities to think and to reason, mingled with value-judgment. Correct decision-making, therefore, is a value-based process—not merely a mechanistic exercise based on experience and reasoning.

There is thus a strong case for imparting value-oriented education. But there are a number of questions which confront us in this context. What is a value? What are the right values which are to be inculcated today? Which ones are most urgent today and for all times. Is there any timelessness in value formation ? Can values be culture-free—true for all men, all societies and for all times and at all stages of human development? How can values be transmitted? Why has there been a value crisis in education? I do not propose to consider these questions seriatim, nor do I propose to present a detailed discussion on them in this brief note. Even then let me take up the last question first—the reasons for value crisis. It seems that in modern times education is concerned more with means and not so much with ends. It also appears that there is dichotomy between the two. Although we tend to agree that education aims at drawing out the best in human child—his body, mind and spirit—or at helping him in the process of his self-realization, or in the process of manifestation of inner perfection in practice we do not tend to have done that. We are mainly concerned with acquisition of knowledge as an end. Knowledge is also considered as a means to a narrow concept of end, an end which is defined in terms of economic gains. Even if knowledge is considered as an end in education, the process of acquiring it has not been considered important. In the process of knowing, the learner has not been liberated as Tagore and Vivekananda wanted, knowledge is *given to him.* One can easily see how an emphasis on knowledge as a goal, in terms of content, can lead to cramming as the method of learning, and *lecturing and note-writing* as the methods of instruction. The relationship of acquisition of knowledge in educational institutions with passing an examination for gaining an economic power has been a harmful development in modern times. Such an approach to education helps in the creation of a competitive social order. In recent times two important components, viz. work education and social service have been introduced into the school curriculum. These are indeed value-based concepts quite in keeping with the educational ideas of Vivekananda and Gandhiji, but the way they are being implemented by attaching hierarchy in importance to other curricular subjects not only frustrates the ends for which they have been introduced in the curriculum, but also demonstrates our lack of concern for these values and even rejection of the inherent values by the school and the society in reference to scholastic subjects This kind of negative attitude to these two important curricular areas will perpetuate an exploitative and competitive society, because one of the mator goals of work education and productive work and socal service was the development of sensitivity to social justice. Gandhiji was concerned with developing an understanding of cooperation and dignity of labour as ends in themselves, not just as means. This is because Gandhiji was aware of the fact that a non-violent social order can be based only on cooperation and sharing and on the participation of all men in the productive process of the society as an end in itself, so that labour, and particularly labour with one's hands, could be accepted as a value by itself. Both Gandhiji and Swamiji were emphatic about the purity of ends and means. Swamiji said, "I have been always learning great lessons from that one principle, and it appears to me that all the secret of success is there; to pay as much attention to the means as to the end". In education, therefore, we need to pay equal attention to the product as well as to the process

If we dig into our past, it will be found that the pursuit of truth, beauty and goodness, has been our guiding priniciple of life down through the ages and that values are embodied in our religions. According to Tagore, a man

of religion "must exist for *Man the Great* and must express him in disinterested works, in science and philosophy, in literature and art, in science and worship". To him religion consists in the endeavour of men to cultivate and express those qualities which are inherent in the nature of *Man the Eternal*, and to *have faith in him.* Truth, freedom and beauty are the qualities of the Eternal Man. To Gandhi Truth and God are the same concepts and Vivekananda saw the Divine in man. According to Froebel, "human nature, like the spirit of God, is ever unfolding its inner essence". The qualities which express this inner essence have been regarded all through history as trinity—"truth, beauty, goodness; knowledge, love, service"; or in the words of Whitehead, "activity of thought, receptiveness to beauty, humane feeling." Human thought has never regarded this trinity of ideals as separate and unrelated goals. It sees them as elements of harmony. Wholeness of living unites truth, beauty and goodness in symphony.

Philosophically considered, what all these great thinkers appear to point out is the need to emphasize the universal values and similar characteristics of all religions for the sake of the unity of all humanity. Values may be conceived and defined by different thinkers, different nations in different ways. To avoid a conflict in perception we in India can adopt a practical approach. For *practical purposes* the sources of values for us can be traced in the preamble of our constitution which ensures social, economic and political *justice, liberty* of thought, expression, belief, faith and worship, *equality* of status and opportunity, *fraternity*, assuring the dignity of the individual and the unity of the nation.

Thus on the basis of these fundamental rights we can identify our national values as *democraay, secularism* and *socialism.* Education for citizenship in India should be concerned with the clarification of our thinking about these values and the strengthening of our practices and faith with regard to these ideals as a way of life and living. A careful and close scrutiny will lead us to discover that these basic national values are founded on the bedrock of 'love' for mankind.

Gandhiji also gave us a set of values which he practised in his own life and he was of the firm conviction that these values, if inculcated in our young people through education and practice in their daily living, would help them experience the unity of the individual self with the universal self, which is the ultimate goal of all value formation. These values, viz. truth, non-violence, love for mankind, equality of mankind, fearlessness, freedom, democracy, self-help, respect for all religions, purity of ends and means, honesty, self-discipline, self-restraint and cleanliness of body and mind, unity of thought and action, form a firm ethical and spiritual base. These values are not only consistent with our own cultural heritage, but are also of pragmatic importance for solution of our diversified contemporary problems of life in our homes and society.

Swamiji also wanted "life-building, man-making, character-making assimilation of ideas". He said, "if you have assimilated five ideas and made them your life and charac ter, you have more education than any man who has got by heart a whole library...the end of education is man making". Obviously Swamiji emphasizes the need for personalization of values which direct the overt behaviour in personal and social living. To him the very essence of education is concentration of mind, not collection of facts. "If I had to do my education once again, I would not study facts at all", said Swamiji. Thus the entire superstructure of Swamiji's concept of man-making education is based on values; and love for mankind is at the hard core of these values For, to him and his Master Man and God are indivisible.

How can this education for values be

imparted? Can an examination-ridden curriculum give these values? What basic changes in the curriculum and the processes of teaching and learning as well as in the organization of institutions are needed for value formation? Is a social regeneration, a prerequisite for transmission of value? Do we have the teachers to impart value education? For imparting man-making education Swamiji wanted a kind of teachers—teachers who must not teach with any ulterior selfish motive, for money, name or fame. Teachers' work must be simply out of love, out of pure love for mankind at large, said Swamiji.

We must have to find out solution to these problems, if we want to survive this crisis of values. If we do not succeed, there is no hope far mankind. Finally, values cannot be taught through formal or direct teaching. They can be inculcated only when the school provides for activities and experiences inside and outside the classrooms which promote responsibility, cooperation, honesty, fair-play and self-control. Activities bringing about a close cooperation between school, home and community will go a long way to bring about value-oriented education which mere textbook education cannot give. Education for values has to be based on the idea of supremacy of reasoning over anything else and not on dogmatic and unintelligent conformity. Students should, therefore, go through the process of reasoning and develop competence in reasoning out solutions to life's problems. So long as man is guided by impulses rather than reasoning, man is likely to be self-centred and exploitative.

In this paper I have raised a number of questions and have not ventured to suggest solutions. This is not an easy task We need to build the concept of man, man of the twentieth century and the century that is universal man in terms of the values which he will cherish. This is the necessary first step for giving shape to Swamiji's ideal of 'man making education'. Instead of cherishing so-called middle-class-and elite-forming values, let us inculcate through education those values which bring us closer to the underprivileged, deprived and alienated masses and so that we derive strength to work for them. Let us take the challenge of value-forming education even within the framework of the present curriculum, and the unfavourable socio-political environment in which the school system works. □

Teaching as a Profession

Foundations, Problems and Potentialities

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LITTLE attention has been given to the development of the qualities, techniques and specialities required for teaching, by the educational planners, administrators and teachers concerned with teaching. The word 'profession' though used several times in teachers' training syllabi at different levels, yet the qualities and other characteristics of a professional have not been recognized by any professional organization. Teachers working in primary and secondary schools regarding themselves below the standard agree that the teaching services should be developed into a profession It is significant to note :

1. What attention has been given to the concept of 'teaching profession'?
2. How useful is this concept for teachers, schools, children and their guardians ?
3. What do they mean by the term 'teaching profession' ?

Profession is given higher and more dignified meaning than occupation and it denotes eminent social prestige. It is due to the fact that persons engaged in professions are highly qualified and least concerned with family systems. Professions are attached with higher cadres of society on the basis of social prestige while occupations are attached with low cadres of society. Hence, profession gets the status of the people, recognized by the general public.

Meaning of Profession

Scanty literature on 'teaching as a profession' has yet been created. In such a situation the question of its publication does not arise. The administrative officers have also not regarded teaching as a profession, but have included it in social services. General people regard 'profession' and 'professional' in an ordinary sense. Profession generally means working in an occupation for a long period. The training period for an occupation

is the shortest, for example, the work of truck driver. Social prestige is not included in this meaning. On the other hand, in order to turn an occupation into a profession, the training period has no effect. The barbers have been doing the same occupation for centuries, but it cannot be called profession. It is believed that each profession has its own scope, persons engaged therein follow a particular language-style, have their own behaviour patterns and specialities Their traditions and customs can be learnt fully by local persons. In a profession, particular efficiency and skill are achieved as a result of intellectual training.

Is Teaching a Profession ?

For a long time, that is, before the twentieth century, teaching was regarded as a service and not a profession. The teachers taught children with a spirit of dedication and the society was held responsible for their livelihood. On the basis of regarding teaching as a service, the relation of Eklavya and Dronacharya, Aruni and his Guru, Krishna, Sudama and their Guru Sandipana have found an eternal place in the history of Indian education It is now to be decided as to whether teaching can be called a 'profession' on the basis of the above facts ? if not, what efforts are yet to be launched in this direction. According to Vaish :

> There is other factor which distinguishes teaching from other professions An administrative officer wants to carry out his decision immediately and wishes to know the results as early as possible. Same is the case with a doctor who wishes to know quickly the effect of his/her prescription. On the contrary, the process of education puts forth the results after a long period of time, meaning thereby that education produces far-reaching outcome, so the teacher is neither interested in measuring the effect of his teaching as early as the teaching comes to an end, nor he is worried to achieve soon the target by some way or the other. Where the emphasis is laid down on knowing the results quickly the person concerned should be involved totally in it. But in teaching the teacher is indifferent in view of aims and means comparatively considering its far-reaching effects and as such teaching carries a sacred place. Hence in comparison to other traders, the teacher occupies an important role in society. Professionalism guards the social interests observing the rules and traditions of the society.[1]

There is one year's syllabus for a graduate to get admission in the teaching profession. The syllabus for primary teachers is of two years, but one year is utilized by correspondence course. The course of PTI, child teacher, craft teacher, montessori, kindergarten and cosmic training is of one year's duration. Eleven years' school education is essential for eligibility of admission therein. The post-graduate course is also of one year's duration. On the contrary, the training is optional in the teaching of subjects like music, drawing and home sciences. Teaching technique, psychology and social values are to be developed as minor or subsidiary subjects at the graduate and postgraduate level training syllabuses and such a system can be considered for primary teachers.

During the last five-seven years, universities like Kurukshetra, Gauhati, Calcutta, Agra, etc. have adopted two years' courses for the post-education syllabuses, but with a different aim By accepting education as a discipline, its postgraduate courses have been developed just like other subjects, but it is not

[1]Anil Vaish, Social responsibility of the teacher, *Shivira Patrika*, Directorate of Primary and Secondary Education, Rajasthan, Bikaner, Vol 20, No. 5, Nov. 1979, p. 221

necessary that these syllabuses should develop teaching skills and efficiency. Four years' degree courses in education were started by the NCERT in the Regional Colleges of Education but these courses were suspended. Only the Uttar Pradesh government conferred L.T. after one year's training which was also discontinued. This degree can also not be called 'profession' on the basis of other criteria. In case teaching is to be included in the professional category, the training period is to be increased. Development of pre-degree courses deserves prominent place in this direction. The period of degree courses can be increased after enrichment and postgraduate courses also have great potentialities of enrichment. Other short-term courses should also be reconsidered and if they could not be extended they should be stopped.

The quantum of knowledge of psychology, social values and teaching methods distinguishes a teacher from ordinary citizens and on this ground teaching can be recommended to be a profession like medicine and law. Objectives of education and syllabus have no direct relation with the public men, but how the schools are educating their children, definitely touches their interests. They can also differ with the schools. If teaching is made a profession like medicine, closely connected with special techniques and skills, it is just possible that the general public would not be able to discuss the matter with the schools.

Nobody is in a position to accept that teaching is a technical job like medicine and law because teachers shirk from the responsibility of taking up this technical job. Teachers are often heard saying that they can teach any subject. They are at a loss to understand how this comment has shocked the tendency of creating teaching as a profession.

Training has been recognized as a passport or licence for teaching since long, but the institute giving recognition is different from the institute giving recognition to medicines and law in as much as this is an autonomous institute, powerful one, and can cancel the recognition if requisite level is not attained. This agency determines the terms and conditions of recognition, makes changes and amendments. In 1955 when shortage of teachers was felt, it was fulfilled by means of conducting short-terms courses. In some cases, what to speak of training, even underqualified teachers were recruited. Such instances had been occurring in maths, science, home science, drawing and music subjects. Such teachers can be traced in far-off and inaccessible areas or backward/scheduled caste/scheduled tribe majority areas, but such examples are not found in medical or law or engineering fields. There is no agency in India at present which can give recognition to teaching profession. There is one National Teacher Education Board and Teachers' Education Boards in some states which were set up as per recommendation of the Kothari Education Commission (1964-66). Their constitution and working procedures should be organized in such a way that they might be entrusted with responsibility of recognizing teaching professions.

Teachers' organizations are functioning in almost all the states but they have remained entangled with transfer policies, benefits and improvements in pay-scales and have done nothing in the direction of recognizing teaching as a profession. Indian Institute of Public Administration or All India Management Association and their branches in states can be extended. Recruitment in a profession should not be permitted by states but it should rest with the professional organizations so as to keep up the quality of work and remain neutral to bureaucracy. If the work falls below average level, proper arrangements for cancelling the permission should be provided.

The chief surgeon in the medical profession allows his newly appointed associates to accompany him during an operation and makes him efficient in his occupation, but there is nothing like this in education field. On his promotion to the post of supervisor officer the teacher begins to consider himself as an officer and not a teacher His sympathy towards teachers comes to an abrupt end. In order to develop teaching as a profession, to get recognition for it, the change in the ideology of officers is a *must*.

Persons engaged in a profession can maintain the high level of work by working in accordance with the moral code. The permission of teaching is cancelled when the moral code is violated If any teacher, in the opinion of other members of the professional organization, violates the code, his membership should be discontinued. The professional organization determines the work level of its members and violation of code. The education codes have also been framed in all the states of India. There is a provision of penalty for violation of code. The bar necessity is that the code should be obeyed strictly.

There is a direct and personal relation between buyers and sellers in medical and law. Much has been written on this aspect in educational sphere also. Personal guidance and teaching are burning problems of the present times. The teachers work in terms and the students of the school hours. The member of the team and the students of the class have their own needs and special characteristics. Each child is different from the other. Here the question arises—if each child is taught according to his needs, the teaching task becomes difficult. It is to be remembered that individual teaching and direct and personal contacts are not possible, but efforts in this direction should be invariably launched. In order to turn teaching into a profession, the size of the class should be the smallest or the number of students in the class should be the least so that the teacher can contact the students as and when the necessity arises. It is hereby argued that there are many clients demanding the services of a doctor and a lawyer and more customers indicate more degree of success. They treat each client on the individual basis. As an exceptional case, teachers demand group-guidance like a medical psychologist.

Remuneration in the form of pay for services are common in medical, engineering, law and teaching, but the question 'who determines the remuneration ?' arises In allopathy and law, it is decided by the parties concerned or professional organizations, in teaching, it is decided by the government, like other services. The teachers' organization gets it increased by the government through pressures or compromise from time to time. In some states, acts have been framed by the constituent assemblies. In the situation of their violation any of the two parties can appeal to the courts of law. Remuneration should be determined in the form of pay. As the qualifications and working capacity of the teacher increases, his remuneration should also increase in the same proportion. In medical, law and engineering, it depends upon their consumers as to whose services are to be utilized? Is it possible in teaching? If yes, it may be possible that a certain institution may be crowded by the students, others may be awaiting for a single student. In such a situation, it may have to suffer too much economic difficulties. It can be seen in actual practice in some proportion Some guardians desire to admit their children in a particular institution, not only because it adopts a special education method but there may be some causes behind it, e.g. highly qualified teachers, well-equipped libraries, uptodate laboratories, beautiful playgrounds, etc. From this view, teaching can be called a profession to some extent.

Powerful Professional Organizations

Any medical practitioner is an ordinary doctor and a member of professional organization first and than a ENT specialist or a heart specialist. It is also true in the cases of persons engaged in law or engineering, but it is not so in teaching. The teachers engaged in teaching are divided into two types of organizations —gazetted and non-gazetted and consequently their voice loses weightage and becomes unimpressive. There is no uniformity in the teachers' opinions. When a teacher is transferred from primary classes to secondary classes or is promoted from lower to higher pay-scale, he forgets the spirit of nearness or closeness of the previous life. They after promotion do not mind the interests and benefits of the teachers running in lower pay-scales. Some subjects are supposed to be difficult ones, such as English and maths. The teachers of these subjects form their separate organization and consider themselves as separate and important entities. They consider themselves more recognized as compared with other teachers teaching subjects like craft, agriculture, drawing and music. The interests of the teacher community as a whole disappear from their minds.

If teaching is to be converted into a profession, all the teachers should forget the distinctions of status, pay and subject importance and be united into a professional organization and necessary characteristics should be developed. All the teachers should be the members of the same organization and be affiliated to it. Such type of vast literature should be produced and changes and additions in the teachers' training courses should be made so that teaching should not be considered negligible as a profession.

Evaluation

In view of the above-mentioned discussion, there seems to be two central subjects to be discussed and carried out :

Distinction between teacher and non-teacher in cultural traditions and working procedure.

The control of teachers' organizations upon the working conditions and circumstances socially approved.

The close contacts of guardians with the educational institutions is the only source of these tasks. An ordinary citizen knows that the good teachers occupy an important place in school. The teachers and teachers' organizations are also agencies along with the government to affect education. All concerned will agree that all persons have started taking interest in school activities. This interest may prove to be good or bad.

The effect of activities and culture on the child's achievements has been recognized since long. In big cities, these relations do not develop and the scarcity of cordial relations in originating a number of new problems. The distinction between teachers and non-teachers and distinction between the working conditions and circumstances cannot be said to be appreciable because these social relations affect the learning of the child in the long run.

As far as education is under the government control, the decision of the government on syllabus, appointment of teachers, their salary, new institutions or its upgradation, etc. is the only working force which makes the development of relations of teacher and students in the form of buyers and sellers not only difficult but also impossible. The government appoints the teachers, but the teachers' voice carries no weight while admitting in schools. Neither the children nor the guardians do exercise any power in the determination of pay of the teachers. As far as personal relations are concerned, there come least chances of their development. On

he other hand, standardization is an im- portant problem. After one's appointment as a teacher, if his performance is of below standard, it is very difficult to remove him from the government service as a teacher. It may be possible in autonomous schools but the principle of standardization will work cent per cent it is doubtful. If the teacher develops himself into an institution, not only the standardization but the problem of remuneration is also solved.

The author does not mean the best from the above discussion that teaching should be recognized as a profession or not or professionalism is good or bad in teaching An attempt should be made to understand how the teachers are suffering from the viewpoint of class teaching. On the contrary, what benefits they can derive—whether economic, educational, social or any other? What benefits can be given to the students after getting the recognition of teaching as a profession? Whatever type the benefit may be of it will be utilized for the student community. □

Friedrich Froebel

A Profile

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THE 200th anniversary of the birth of Friedrich Froebel on 21 April 1982 is an occasion for the German Democratic Republic and all Member States of Unesco to honour the memory of the great German educationist. Froebel was one of the leading representatives of the progressive bourgeois approach to the science of education, and the treasury of educational thought has been greatly enriched by his work Friedrich Froebel played a prominent part in determining the development of educational theory and practice in his time.

His theories and his attempts to put them into practice were rooted in his empirical criticisms of the prevailing education system; they bore the stamp of his democratic bourgeois background. This is particularly true of his ideas on the general education of men and of nations, the all-round and harmonious personal development of all members of society and the universal right to education. He made valuable contributions to the science of education, for instance through his ideas on the aim of education, the fundamental importance of the child's active participation in the educational process, the nature and organization of educational content. Froebel's views reflected the social needs of his time. He had realized that the teacher's task always consists in educating children primarily for living 'in the present' and for meeting 'present needs' and 'present demands' as they arise 'at a specific time, in a specific place and in specific

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circumstances'. He was aware of the close connection between social development and education; recent research has shown that Froebel sympathized with democratic petty bourgeois forces, but this is not to say that he dissociated himself from democratic revolutionary demands and objectives. On the contrary, being possessed by an illusory enthusiasm of enlightenment and a blind faith in the unlimited power of education, he harboured throughout his life a Utopian belief in the feasibility of radical reforms. Although, of course, these hopes were disappointed, Froebel's achievements were so remarkable that he is rightly ranked with Pestalozzi, Herbart and Diesterweg as an important representative of classic bourgeois pedagogics. His ideas and practial work in the field of preschool education won him world renown.

Friedrich Froebel (21 April 1782 to 21 June 1852) lived at a time of great social change in Germany He played an active part in important historical events for instance in the Napoleonic wars in 1813-14 when he served in the Lutzen rifle corps. Bourgeois revolutionary forces began to emerge in his lifetime under the influence of the French Revolution and the pressure of popular democratic movements He witnessed, on the other hand, the restoration of reactionary aristocratic rule in the German states and saw the promising beginnings of educational development curbed and reversed. Although Froebel did not often comment on current events, his whole work reflects his interest and involvement in social progress. With almost four decades of successful activity behind him, Froebel declared in a letter written in 1848. 'If you examined the essence of my educational activity you will see that, for a whole generation, I have been teaching and educating children for the republic's sake, I have been preparing them for the exercise of the republican virtues.

Froebel hoped that a marriage concluded between politics and pedagogics on the basis of their common human values would ensure that 'the whole German nation will do as the whole body of German educationists and teachers does today and not only take an interest in German education for the people and its sound theoretical foundations' but also 'play a truly active and constructive part therein', so that education would become everyone's business.

By insisting that a system of universal education should be accessible to all German children, Froebel promoted a democratic approach to educational policy and found that this accorded with the national need for a better educated population which had arisen as a result of Germany's rapid industrial and scientific development. Froebel conceived of universal education as an alternative to the traditional elitist education. Because his Utopian ideas led him to overestimate the real historical possibilities of his time, he thought that it would guarantee the enforcement of the right to education. But at the same time he gave a wider interpretation to the concept of universal education, viewing it not only as education for the people but also as education by the people, in the sense that the people would participate in the education of the

rising generation and the whole of education would be bound up with the life and activities of the people. That was a far-reaching democratic demand which, like his whole educational policy and programme, was well ahead of his time. No wonder, therefore, that during Froebel's lifetime obstacles were placed in his way by reactionary forces seeking to discredit his ideas on universal education and education for the people. After many years of dedicated effort, he was obliged to stop the educational work he had been doing at the school at Keilhau, which he bad directed from 1817 to 1831; his schools in Switzerland were constantly under attack and kindergartens were finally prohibited in Prussia in 1851 and in other German states thereafter.

In Froebel's view, the object of universal education (today we tend to speak of general education as the basis for further education) was to enable every child to develop a well-rounded personality, and not to prepare children at an early age to occupy their allotted place in society or to train them too soon for a particular profession. 'In the final analysis, the education of man can have only *one* basis, *one* aim and *one* purpose: the all-round development of the individual through educational methods specifically designed to foster his threefold powers as an active (creating), sentient (feeling) and intelligent (thinking) . . . being.'

This is the only way of laying the basis for the child's future activity in life and for occupational specialization. According to Froebel, the all-round development of the personality is possible only if the educational process succeeds in 'forging unbreakable links between *thinking* and *doing*, *cognition* and *action*, *knowledge* and *ability*', providing both 'the human body and the human mind with an all-round comprehensive education in keeping with man's innermost nature'. This means that none of an individual's aptitudes should be neglected because they are thought to be worthless or insignificant and all aspects of the child's personality should be assiduously fostered since a true education leaves no gaps and knows no limits but is a lifelong process of perfecting the personality.

Given the aim of developing a well-rounded personality, educational content should reflect the diversity of human aptitudes and powers. The curriculum that Froebel drew up was representative of all the foremost social and cultural concerns of his time—'art', 'science', 'training in methods of exploiting natural resources' and in the 'simple and more complex processing' of the products thus obtained, 'a knowledge of natural substances and forces', 'natural history and the history of mankind and of nations; mathematics and languages', 'No subject of study that is relevant to man's basic needs should be excluded.' Froebel sought to carry out this ambitious educational programme in his schools, as is shown by their timetables and attested by former pupils and visitors. He attached the highest importance to laying sound foundations for mental, physical and

aesthetic training and set great store on the teaching of languages, natural sciences and mathematics as part of a wide-ranging, useful general education. What he demanded was that his pupils should be equipped with 'a comprehensive stock of thoroughly assimilated knowledge and the confidence to make use of that knowledge in their daily life, so that they are able to cope with any situation and meet any challenge, in other words, that they should be capable of 'further developing their powers in any field of activity they may choose' 'It is only through the application of knowledge and learning that we can really confirm and expand what we have been taught.'

There is a direct connection between Froebel's democratic idea of involving the whole population in the educational process and his insistence on the need to make education relevant to everyday life, on the oneness of school and life. He considered the relevance of knowledge to life as an essential criterion to be applied in selecting educational content and a crucial pre-condition for the full development of the individual's aptitudes and powers. 'Just as education, teaching and training and their subject-matter must never be dissociated but must be visualized as being so closely interlinked as to form an integrated whole, so also should education, teaching, training, school and what they stand for never be separated from life; still less should they come into conflict with each other, for school and life, knowledge and action are bound up together.'

This statement of what Froebel demanded of education implied criticism of the conditions prevailing in the school of his day, their alienation from life, their insistence on the memorizing of lengthy religious texts, and their use of discipline and cramming to enforce blind obedience to the reactionary authorities.

In opposition to this, Froebel based his educational theories on the idea that man develops his powers through his activity and that the educational process must accordingly be rooted in 'doing, working and thinking'. The whole of his education system—including pre-school education—is based on the activity of the children under the guidance of their teacher. 'To link doing and thinking and to teach children to link doing and thinking : this is the source of all productive education.'

The educational process must therefore be designed to 'cultivate the urge to be doing something'. This principle must underlie all efforts directed towards 'the development of the child's truly human qualities and the elaboration of a satisfactory all-round education'

Froebel's insight into the value of activity for character formation led him to show how all forms of activity—playing, learning and working—have their own special significance for the true education of man. He revealed the many ways in which they are inter-related, drew attention to their necessary interaction in the educational process and pointed out that they could contribute to the success of

attempts at the all-round and harmonious development of the personality. 'Thus, work, instruction and play are to form an indivisible whole which will become a sound basis for a contented, energetic, enlightened and happy life.'

Froebel always saw education as a reciprocal process affecting both teacher and student, a process in which the teacher, guided by educational principles, influences the development of the whole person mainly through many different activities, a process of including both student and teacher to make a conscious effort to change themselves. A true teacher and educator must always be capable, simultaneously, of 'giving and taking, uniting and dividing, dictating and giving way, acting and enduring, being strict and indulgent, firm and adaptable'.

Friedrich Froebel's greatest achievement undoubtedly lies in the field of pre-school education. Within a few decades, his idea of kindergarten, as expressed both in theory and in practice, had spread throughout the whole of Europe, the United States, Japan and many other countries. Froebel took up the ideas on pre-school education developed by Comenius, Rousseau, the Philanthropists, Pestalozzi, Oberlin, Owen and Fourier. From the practical experience that had been gained in day-nurseries he drew new conclusions of great historical significance. He was already advanced in years when he worked out his theories on pre-school educator. In so doing he anticipated latent needs, since Germany's rapidly expanding industry had to be supplied with additional manpower, and one way of doing this was to employ women as well as men in the production process, Froebel founded the first 'kindergarten' in 1840—the word was coined in the same year—and thus took the first decisive step towards the fulfilment of his educational mission. His work is of historical importance because the entire education system was reorganized thanks to his determination, and universal pre-school education became in accordance with his views, the foundation and substructure of a homogeneous system. As his nephew, Julius Froebel, once wrote, he thought of the kindergarten as 'simply the substratum of an edifice of ideas, objectives and means so constructed as to encompass the whole education of man from earliest childhood to an advanced age'.[1] Froebel's thinking went far beyond the views widely held in his day regarding the significance, aim and duties of day-nurseries and their prevailing practices. He worked out a comprehensive and detailed system of pre-school education which met practically all of the demands of his time, but which is admittedly difficult to grasp because his writings on the subject pursue many metaphysical trains of thought. In his view, the object of pre-school education was to enable the small child to become an active, sentient and intelligent human being. The 'Universal German Kindergarten' should be an '*establishment for the all-round care of the growing child*' and should provide every child with 'all-round guidance for his all-round development'. This should be done by means of the activity best suited to a child of that age, namely play. Froebel perceived play not only as the principal activity of the pre-school child, but also as a 'mirror of life' that gave 'the child a glimpse of the world for which he is to be educated'.[2] Play, according to Froebel, always served a purpose.

He saw it as the expression of the child's innermost being, the reflection of his aptitudes and creative powers, which were revealed in the way he 'processed' a material or used an implement during play.

Every activity, every act of any individual, even of the smallest child, is the expression of a purpose proceeding from a relationship with something which has to be handled or represented. But in order to feel this urge the individual, and especially the child, usually needs a material, a separate, specific object, even if it is only a little piece of wood or stone, with which it can make something or which it can turn into something.

When the child is playfully active, when he 'processes' a material with a specific end in view and uses an implement for a particular purpose, he acquires the ability 'to develop all his powers and aptitudes as freely as is appropriate at the stage he has reached in his life and education'. On the basis of this conclusion, Froebel worked out a self-contained play system, the principal feature of which was the handling of spheres, cylinders and cubes. Using the 'gifts' he had devised and various other materials, the child was to develop his mental and physical powers in the various games, discover the world and its inherent orderliness. It was through play and in play that the child's personality could be fully developed in all its aspects, and therefore play 'should not be a haphazard activity, it should not be left to pure chance'. It is clear that Froebel's 'gift' system was influenced by the contemporary state of knowledge in the fields of natural sciences and mathematics, with which he was well acquainted. Many of Froebel's 'gifts' can still be used to help pre-school children to discover the world. Having been rationally integrated into modern views on the educational process and its objectives, they are successfully used to this day in the kindergartens of the German Democratic Republic.[3] It should be borne in mind, of course, that if it is applied onesidedly, as it has been by many of his successors and disciples, Froebel's play system also encourages certain tendencies towards a formalistic organization of the educational process in the kindergarten.

Even at the infant and kindergarten stage, children should be able to assimilate all kinds of information, with the help of the 'child leaders' (later : 'kindergarten teachers') who introduce them to the world around them and to life in society. The subject-matter chosen by Froebel for the kindergarten syllabus shows that his first consideration was to lay the foundations for mental, physical, moral and aesthetic development. He stressed the need to bring out every child's individuality and to take great pains to prepare all children for their future life in society. Froebel's writings are therefore a source of valuable guidance for the social education of even the very youngest children. Having observed Froebel's practical work at first hand, Diesterweg described it in the following words : 'A child's best plaything is another child. In the kindergarten the child lives in close association with other people ; only in this way can he be prepared for

living in society. In his play, the child can and should live in advance his whole future life instinctively, without realizing that he is doing so.'

Friedrich Froebel was a pioneer of pre-school education for all the children of the nation. This progressive idea was taken up and propagated during his lifetime and in the second half of the nineteenth century by many democrats, for instance by Adolph Diesterweg. Froebel's ideas were carried beyond the frontiers of Germany by democrats who emigrated after the failure of the 1848-49 revolution, for instance Johannes Renge and his wife took them to England and Carl Schurz and his wife and Adolf Douai took them to the United States.[5] Douai founded a German school in Boston in 1956, adding a kindergarten to it later on. His book entitled *The Kindergarten . A Manual for the Introduction of Froebel's System of Primary Education into the Public School*[6] was published in New York in 1871, and a Japanese version was brought out in Tokyo in 1876. It was due to this book that Froebel's ideas began to be disseminated in the United States and Japan.

In the last third of the nineteenth century representatives of the German labour movement became interested in Froebel's humanism and defended it against all one-sided interpretations. This cause was taken up, for example, by Wilhelm Liebknecht, one of the most outstanding figures of the German labour movement As editor of the newspaper *Die Gliechheit*, Clara Zetkin helped to make Froebel's theories more widely known, and especially his ideas on play and its importance for the development of the child's personality.[7]

Froebel's ideas have found a home in the German Democratic Republic. His heritage has become an integral part of the socialist approach to education and his work has greatly stimulated both the science of education and its practical application.[8] Educationists of the German Democratic Republic gave expression to their appreciation of Froebel's work and their fruitful interaction with his legacy in commemorative ceremonies in 1952, 1957, 1967 and 1977. Froebel's bicentenary will be yet another occasion for studying his enduring achievements in greater depth and continuing his work at a higher level.

NOTES

1. Quotation from *Gedenschrift zum 100. Todestag von Friedrich Frobel am 15 Juni 1952* (Commemorative Book to Mark the Centenary of Friedrich Froebel's Death on 15 June 1952), Berlin, 1952, p. 108.

2. *Frobels Theorie des Spiels* (Froebel's, Play Theory), 2nd ed., Part I, p. 16 et seq , Weimar und Langensalza, 1947.

3. Cf. Lore Thier-Schroeter, *Friedrich Frobel—seine Spielgoben in des Deutschen Demohrattische Republik* (Friedrich Froebel : His 'Gifts' in the German Democratic Republic], Berlin, Volk und Wissen Volkseigener Verlag, 1971.

4. *F. A. W. Diesterweg—Samtliche Werke* [F. A. W. Diesterweg—Collected Works], Vol. IX, p. 66, Berlin, Volk und Wissen Volkseigener Verlag, 1967

5. Cf H. Konig, 'Die Arbeiterbewegung und das progressive padagogische Erbe Friedrich Frobels' [The Labour Movement and Friedrich Froebel's Progressive Educational Legacy], in *Jahrbuch fur Erziehungs-und Schulgeschichte*, Vol, 18, p 39 et seq., Berlin, Volk und Wissen Volkseigener Verlag, 1978.

6. A Douai, *The Kindergarten. A Manual for the Introduction of Froebel's System of Primary Education into the Public School*, New York, 1871.

7. Cf. C. Zetkin. *Uber Jugenderziehung* [On the Education of Young People], Berlin, Dietz Verlag, 957, and G. Hohendorf, *Revolutionare Schulpolitik und marxistische Padagogik im Lebenswerk Clara Zetkins* [Revolutionary School Policy and Marxist Educational Theory in the Work of Clara Zetkin], Berlin, Volk und Wissen Volkseigener Verlag, 1962.

8 Cf. *Gedenkschrift zum 100 Todestag von Friedrich Frobel am Juni* 1952, op. cit., 'Frobel-Ehrung 1977 in der Deutschen Demokratischen Republik 1977' [Tribute to Froebel in the German Democratic Republic], in *Jahrbuch fur Erziehungs- und Schulgeschichte*, Vol. 18, op. cit , p. 11 et seq.

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Educating the Gifted

L. S. SINHA

THERE have been good many child prodigies who made significant contribution to society. John Stuart Mill whose IQ was estimated to be more than 180 could read Greek at the age of four. Charles Dickens tried his hands at writing a tragedy when he was only seven. Issac Newton, while he was yet a child, used to make working models of water-clocks, wind-mills and other intricate machines. James Hillier, inventor of the electronic microscope, tore down the new telescope his father had bought him only to reassemble the parts. As against a few names we know, there must have been a large number of geniuses who passed out into oblivion without attracting notice of a teacher or a parent. The question that confronts us today is: Should we allow such gifts to perish or should we do something to salvage the situation ?

Our committal to democracy implies that each individual child should be allowed to grow at his or her own differential rate of growth. We need to concentrate our efforts to harness the talents of each whether it be a backward or one with a superior intellect. The present educational system is ill-equipped to cater for either. Lack of concern for the gifted children is, in the ultimate analysis, a national loss the extent of which is not possible to quantify. In the USA little interest was in evidence till the end of the nineteenth century. It was only after the second decade of the present century that a good deal of research was mounted opening up opportunities for the gifted children. While Terman and his associates carried out their research projects in California in the West, Professor Hollingworth experimented with her gifted children in New York in the East. These psychologists made a major contribution in awakening nation-wide interest in the educational programme of a gifted children.

We, in our country, have done little to identify the gifted, much less to arrange for their schooling. A few public schools *per se* might be taken for catering to their needs, but that too not on any scientifically planned basis. The lamentable lack of concern for the intellectual minority is attributable to meteri-

cious values we attach to our concept of democracy. The Plowden Commission Report (1967) on primary education in England called it an "egalitarian suspicion" and noted that "at the outset giftedness meets with irrational obstacle.. The schools have a responsibility towards these children which must be taken seriously We cannot afford to waste their talents." Even though there is a positive correlation between the high income and superior intelligence, giftedness cuts across social stratifications.

Not only a high score on general intelligence as revealed by the traditional tests, but special abilities of a high order not necessarily associated with superior intelligence quotient, should be interpreted as constituting giftedness. These special abilities or talents may be in arts, music, science, mechanics and leadership, etc. There has hardly been any agreement as to what IQ level would earn classification among the gifted population. It may be as low as 120 and as high as 200 depending on the quality of intake at any particular school in any particular community. American schools have catered for the gifted population as per their own norms not conforming to any mutually agreed standard. However, children testing 183 IQ and more could earn for them the accolade of 'genius' while those testing between 140 to 183 IQ as those of superior intelligence.

A popular superstition about the gifted used to be that they might be having a poor physique and a maladjusted personality. Hollingworth showed through her researches that they are children with a good physique and a well-balanced personality endowed with the capacity to make their own adjustment. Some of the common traits of these children are that they are given to a high degree of inquisitiveness and reflections about morality, the right and wrong aspects of various issues. They learn quickly, perform difficult mental tasks, comprehend relationships quickly and tend to be original Credited with a good memory they are keenly observant and respond quickly. Usually they are two to three years in advance of their peer groups in regard to scholastic as also non-scholastic abilities. Terman has come to the conclusion that in case of a six-year old child testing 180 IQ the intellectual level may be as high as that of an eleven-year old, but his physical development may not be accelerated by more than 10 per cent and social development by not more than 20 to 30 per cent

Particularly in cases of children gifted with a very superior intelligence (IQ around 180 or more) adjustment problems do creep in. Such children by virtue of their highly superior giftedness tend to feel isolated. Frustration and anxiety colour their creativeness. But there is little evidence to support the oft-repeated assertion that stresses within the personality are a source of creative drive. If suitable steps are not taken to canalize the creative urge or provide the much-needed guidance, chances of personality maladjustment or neurosis are increased.

Catering to the curricular needs of these children can be attempted in various ways One method is to accelerate the learning programme by a year or two. Such a device might produce social adjustment problems as a result of difference in the age of the peer groups Normally such an acceleration is limited to the earlier part of childhood before adolescence sets in, because the chances of maladjustment are minimal at that stage. The other device more commonly employed is enriching the curricular programme within the class itself, a practice which obviates the difficulty of social adjustment. It is also argued that heterogeneity in such a class leads to a more useful democratizing process and fostering of leadership qualities. However, critics of such an arrangement assail the prac-

tice by alleging that brighter children's learning is not really accelerated and that there are greater chances of under-achievement. The Education Policy Commission of the USA had besides the above two, recommended a programme of special elective courses for the gifted children as also general ability grouping, the latter being possible in really large size schools where such a grouping is feasible.

Whatever the strategy adopted in the arrangement of curricular programme there is an inescapable need for providing guidance, both personal and academic. Motivation has also to be provided to these children in various ways in a consistent manner so as to develop their inherent capabilities to the fullest extent. Directing them to sources of learning (library is only one), coordinating the efforts of the teachers so as to meet the child's academic and other personality needs and exploiting expertise available in the community are essential factors in the learning programme of the gifted child.

The role of teachers in the education of these intellectually superior children is a challenging one. Not only is he to play an important part in the early direction of the gifted, he is to be concerned with their scholastic as also non-scholastic development in a significant way. He has to evince qualities of patience, sympathy and understanding and should possess a wide range of interest, flexibility of approach and an unusual proficiency in teaching of a particular subject. As future development of the child's talents are as much his concern as the present, it is necessary that he allows the child the maximal opportunity to develop his creativity without burdening him with the weight of his own knowledge. He has to ensure in his children a capacity of self-learning and profiting from the existing resources. This concept of teaching-learning process ensures learning even after leaving the formal seats of learning. Depending upon the nature of strategy adopted for educating the gifted the teacher has to play his own part in fostering talent While engaged in the process he should also take into account the parents whose attitude towards their children can appreciably make or mar their progress. The etchings of a talented child may be frowned upon by an ignorant parent and encouraged by a thoughtful one. A liaison with the parents can be of immense value. The teacher has to display an equal concern for eliminating stress and strain from the mind of the child so that his progress is unimpeded. The teacher's responsibilities would thus consist in (*i*) modifying the curricular programme in a way that more challenging subjects are included and in providing more opportunity for creative work, (*ii*) helping them to take up research-oriented projects, (*iii*) providing them a rich environment to enable self-directed work, (*iv*) forming informal groups of effective and smooth learning, and (*v*) providing opportunities in social environment to make use of available resources.

The growing expansion in the field of education ever since the independence and our increasing concern for the masses has largely been responsible for a corresponding neglect of the gifted and it is time the educational administrators recognize the need for harnessing their talents for the common good. □

Impact of Sex Education on the Social Adjustment of Individuals

K G. DESAI

CHANDRA MOHINI ANAND

ANIMAL behaviour can be broadly divided into two categories : (*i*) instinctive and (*ii*) intelligent, though it is certain that no behaviour is without an instinctive root nor is totally unintelligent. 'Sex' is also one of the instincts which lies in the sphere of emotional behaviours associated with male-female relations and is based on the anatomical and physiological difference between the male and the female. "Sex must be considered an integral part of normal human living to be utilized, in building a complete and a balanced individual and family life, and in building constructive, satisfying, personal, home and community relationship" (Kirkendall 1950: 1). Instincts are innate propensities to certain seemingly rational acts performed without conscious design. According to Dale, an instinct is regarded as an inborn tendency which impels the person to react in a particular way to a definite situation or object, without either having had any previous teaching or experience or possessed by any idea of the goal to be achieved by the action, brought about by instinctive impulse. During some physiological condition, some of the instincts become manifested such as in hunger, sexual maturity, pugnacity, etc. (Dale 1971: 98-99)

Man is a social being and he differs from the beast in his intellectual development which compels him to condition his instincts in a socially acceptable way and intelligence helps him to design the framework in which instincts can be conditioned. Conditioning of sexual instinct is a life-long process. Sex and sexual behaviour are affected by the society in at least three ways :

1. The manner which parents and teachers in home and school teach about sex to an individual.
2. The legislation through which the society tries to implement its mores.
3. The general public opinion which prescribes do's and don'ts to its members for sexual behaviour.

The task of the home and the school is to socialize the child to fit into the society, but in our society sexuality is suppressed, resulting in unharmonious and unspontaneous development of the child. Through legisla-

ture's control, interest in sex and sexual behaviour are channelized into the married life and pre- or extra-marital talks or interest are completely tabooed. The society also controls the behaviour of its members through public opinion and mores. Different degrees of sexual permissiveness exist in different societies and at different times in the history. Mythology and literature are full of stories of such permissiveness to which we expose the children and adolescents. They are on the other hand reared to respect the existing mores of the erstwhile society. This discrepancy in what is expected and what they read in mythology or literature creates dilemma and frustration among the adolescents. Added to this is the lack of knowledge of the functioning of sexuality, with the result that adolescents many times suffer emotional strain. The adverse attitude of the society towards sex matters and the incapability of parents and teachers to impart right kind of sex education add fuel to the fire which results into maladjustment of individuals. The breaking of joint families and increase in nuclear families deprive children of opportunities to observe sex-roles of family members.

Meaning of Sex Education

Sex education stands for the protection, preservation, extension, improvement and development of the accepted standards of ethics of a society and also the monogamic family. Sex education not only includes imparting instruction concerning facts of sex and reproduction, as biological or physiological principles, but it also means a comprehensive and progressive process of care, guidance, adjustment and formation of right attitudes. In December 1944, a conference of educators was held in the Office of Education in the United States of America to discuss sex education. In this conference, sex education was considered synonymous with social hygiene and this term was preferred with the following definition:

> Social hygiene education is conveniently described as instruction which includes an understanding of physical development, mental health and veneral diseases, the social and psychological phases of human relations as they are affected by sex, guidance in matters related with sex, understanding patterns of conduct, building of sound basis for marriage and family life, constructive community living, assumption of social responsibility and any other matter relating to normal association between sexes (Kirkendall 1950: 57).

Due to the adverse attitude of the society, lack of proper knowledge about sex matters, and excessive protective feeling of parents toward children, sex is considered taboo in the society. As soon as 'sex' is read or heard, people perceive it as something connected with genitals which is dirty and filthy and similar to a process of excretion of waste products.

Social Aspect of Sex

In our society, both sexes do not mix freely with each other. In school when boys and girls are passing through the adolescent age, they are interested in mixing freely with each other in order to understand the difference in their personalities. Although it is a natural instinct, they are scared of the elders' eye, and consequently they become defensive for their reputation. They become hostile and aggressive and these emotions usually lead them toward maladjustment, in school, at home and in society.

Some parents lead their children to believe that sex and sexual expressions are shameful. Girls are probably more amenable to this type of indoctrination, because they are more de-

pendent on their parents' affection. It is often blended with a threat that parents will not love them if they persist in sexual behaviour. The legend of promiscuity would be attached to them very easily, reducing their value in the marriage market. Many adult women are ashamed to admit that they have ever looked at their own genitals or having had any sexual thought. Fear of direct punishment, whether physical or mental, creates guilt feelings regarding sex. In our culture, girls are more suppressed than boys and standards of being a nice girl are drilled into their minds. Although many girls believe that they are free from such nonsense, most of them mould their sexual behaviour according to the social mores and are thus inhibited in varying degrees, even within the context of courtship, marriage and family life.

Learning about sex has three outcomes, viz. acquisition of knowledge, development of wholesome attitudes, and improvement of behaviour; and these result in a better adjustment. Kilander thinks that "of the three education outcomes of sex education, the most important one to achieve the goal is the development and practice of desirable behaviour" (1970 : 21).

Impact of Sex Education on Social Adjustment

Religious families often emphasize that sex is something too sinful and offensive. It has always to be suppressed. Saints and other holy men give sermons on the value of abstinence even in married life. Examples of saints like Ramkrishna Paramhans, Swami Vivekananda, Swami Ramtirtha and others are quoted time and again to support celibacy. All these lead many people with sexual problems to think that they have done something very sinful while actually they might not have done anything of that nature.

Social adjustment enables a person to live in harmony with the members of the society in a healthy way by developing favourable attitudes. Russell (1976) has discussed many aspects of sex and sexuality with reference to marriage and its impact on adjustment of a person within the institution of marriage. Arthus (1947) explored this field with reference to children. He presented his viewpoints with the help of numerous case studies, which show that lack of sex knowledge and adverse attitude toward sex may develop neurotic, introvert and hysteric personalities.

When a person does not feel relaxed in his environment, he grows tense slowly. Consequently the tension reaches its highest level and at this critical point of tolerance, his tensions are channelized in various ways His behaviour deviates from normal. Anxiety, frustration, neurosis, hysteria, inferiority complex, schizophrenia and other abnormalities are different ways of channelization of the tensions which are reflected in the behaviour of the individual. These behaviour disorders vary in their severity, types of symptoms, and causes of development and range from simple maladjustment to deteriorated psychosis. Disordered behaviour in an adolescent arises when the person's inability to solve his conflicts leads to a helpless and incapacitated condition of varying degrees of severity. This helplessness results directly or indirectly from obstruction in participation and communication. It involves a breakdown in social learning and it arrests or retards personal development within the area of conflict.

The Immediate Impact

In the beginning of adolescence, every boy and girl has a natural curiosity to know more about sex and comes across some misconceptions about sex and sexuality which results into worries and conflicts because norms of behaviour vary in different cultures and subcultures. What is proper in one culture is improper in another culture. This is more

true in a fast changing society like ours, in which there is a co-existence of many sub-cultures In schools also, children represent many sub-cultures, because of which we see many discrepant forms of behaviour among the children. The conflicting norms of behaviour of different children along with the variation in the expectation of family and school create abiding conflicts in the adolescent (Kirson 1952 : 7-8).

A number of misconceptions regarding sex and reproduction exist in the adolescent boys and girls which create worries in their minds. Some of these misconceptions are as follows:

1. A girl becomes pregnant if a boy kisses her.
2. The birth of a child takes place through the navel.
3. The fetus sleeps all day and picks the night to start kicking.
4. A pregnant woman must eat for two.
5. Veneral diseases can be cured by having coitus with a virgin.
6. Flowers will wither and pickles would spoil if a menstruating girl or woman touches them or if her shadow falls on them.
7. Ebb and flow of menstruation are controlled by the moon.
8. Menopause causes insanity in many women.
9. The age at which a man is most likely to molest kids is after sixty
10. Hysterectomy ends the sexual life of a woman.
11. Only filthy and dirty boys have nocturnal emmissions.
12. The first instance of sexual intercourse or child-birth will be so painful that one cannot go through with it.
13. One may beget a deformed child as a result of masturbation.
14. Any kind of sexual behaviour indicates maladjustment.
15. A pregnant woman's thinking and behaviour affects those of the child to be born

Ignorance as is evident in these misconceptions sometimes causes a feeling of worry and concern and even inferiority. Girls are more frequently ignorant than boys The middle class lays greater emphasis on the visible expression of romantic love, on duty, on ambition, on thrift and on good manners than does the lower class The latter permits freer expression of the aggressive and sexual impulses, as in fighting and extra-marital intercourse, whereas the middle class encourages the inhibition of aggression and its sublimation in forms like ambition and economic competition (Nimkoff 1952: 58)

A girl is not able to cooperate with the school environment due to the feeling of guilt, shame or fear. The feeling of guilt produces a true psychic need for self-punishment whereas the fear originates from the possibility of condemnation. Guilt derives more from the inner quality of the person's conscience. Shame relates more closely to what society expects of one. The adolescent is readily torn by the conflicting requirements of his familial and extra-familial relations.

Long-term Impact

Life originates from the womb of the mother. Sex education imparted at school will have a long-term effect A favourable attitude developed at school will enable a girl to adjust and adapt properly to family life. Sex education develops confidence for the preparation of marriage and family life. It will remove misconceptions about child-birth and menopause. The girl will be able to adjust to pre-natal and post-natal depression. It will help a girl to assume social responsibility and in the matter relating to normal association between sexes, she will not have

guilt feeling that sex is filthy In India, frigidity in girls is generally due to lack of knowledge and adverse attitude fixed during school days. Being future mothers, they can contribute to a greater extent to the improvement of society. The most important contribution which parents can make toward the proper adjustment of their children to sex is to make their marriage happy and home emotionally stable. The foundation of a desirable adjustment lies in security, happy surrounding and a sense of being loved and accepted Deep emotional conflicts and personality disorders almost certainly result in unsatisfactory relations with other persons.

The value of early sex instruction for after-life is shown by Katharine Davis's extensive investigation among married women. When divided into two groups accordingly as they regarded themselves as happily or unhappily married, it was found that 57 per cent of the happy group had received some general sex instruction in early life, but only 43 per cent of the unhappy group had the same G. V Hamilton's result based on smaller data showed that 65 per cent of married women who received such instruction were in the group whose sexual relations were adequate but less than 35 per cent in the inadequate group (cited in Havelock Ellis 1963 : 25).

The child-rearing must reflect the understanding of the psychological and physical needs of the child and render superfluous any critical competition between the needs of the child and the needs of the parents.

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Centralization of Libraries

Merits and Demerits

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[*It is a case study of a particular university where the centralized system of libraries is in vogue. Leaving the name of the university it will vivify the pros and cons of the centralized system of libraries in a university. Further, the author feels, it will give a clear picture to a professional in library science and a layman in the field of libraries. It will also give an idea to those who want to follow this system or not. It is under no cost to defame or criticize the university.*]

IT IS said in the five laws of library science that "library is a growing organism". But in my view the educational institution like a university is also a growing organism. Because in this scientific age every discipline is being developed very rapidly. For instance, two decades ago, the so-called science subjects like geophysics, microbiology and bio-chemistry are only the by-products of geology, biology and chemistry. But now they have grown to such a size which have paved the way to be recognized as independent faculties. Likewise, every minor discipline even in technology and engineering are also being developed in geometrical proportions. When the growth of disciplines is like this, there will also be a parallel growth in publication of knowledge of each subject-matter. To collect and organize the fast growing knowledge, a library is required. One among such libraries is university library and its subordinate libraries.

Usually there are three-tier system of libraries in the universities : (*i*) university library at the top, (*ii*) college library at college level in the middle, and (*iii*) seminar libraries attached to each department of subjects at the bottom level. Wherever there are college libraries, there are no seminar libraries. When there are seminar libraries without college library, the university has to grant some

amount for its maintenance and upliftment from its central or main fund. If the university does not like to do so, it will easily pave a path to the university library to centralize them and have a control over their purchase of books and journals and process the same at their leisure. This purchase, of course, will take place with the suggestions of the concerned heads of departments of each subject.

Purpose of Centralization

Why the university library suggests this proposal of centralization of seminars is to save the university authorities from over-expenditure on the maintenance of seminar libraries Though this system is meant to minimize the expenditure on purchase of books and journals and the expenditure on the salaries of the qualified staff, etc. it is having its own merits and demerits. The following merits and demerits can be visualized and experienced in the centralized system of libraries at the university level.

(a) Merits

1. *Staff :* In a centralized system of libraries very few trained hands will be enough to the university library (where the centralized work of purchase and processing will be done), and further, each trained staff member will be entrusted with the processing work of two or three seminar libraries, so that the concerned staff member may have the work for the year long. This is how instead of each hand to every seminar library, one hand will be enough to look after the technical work of two or three seminar libraries. Due to this system there will be lot of economy on staff expenditure.

2. *Material economy :* If it is not centralized, each seminar library will have to be provided with the relevent processing material. Each fellow in every seminar library will make a waste of material in his day-to-day work. If it is centralized, there will be a less wastage of material since one man is looking after the two or three seminar libraries' processing work.

3. *Bulk orders from one place :* It is also easy for the publishers and booksellers to supply the required books and journals to one place at one time without any delay and on one freight.

4. *Economy in adding multiple-copies of single title :* If it is a decentralized system each seminar library will buy at least two or three copies of any title or prescribed book for the use of their students and teachers. Sometimes each seminar may tend to add a reference material like yearbooks or encyclopaedia, etc. This is a mere waste in each seminar library and hence in this centralized system of purchase if it is genuinely required, the order will be placed or it will be cut down. The ultimate aim in this system is to avoid the duplication of titles since this system is meant to cut down the unnecessary expenditure in adding books to the seminar library.

5. *The position of the university librarian :* In a centralized system of libraries, the position and status of the university librarian will rise very high, since he is supposed to deal with complete fund in lakhs and will have overall supervision and contacts with all the heads of departments who will directly come under this centralization.

(b) Demerits

1. *Centralization of many qualified hands at one place :* Due to this system almost all the qualified staff will be in the university library, only to look after the technical work of seminars. In this situation seminar libraries will be neglected, since they are managed by only book-bearers, lab-assistants under the lecturer-in-charge.

2. *Abnormal delay in supplying the required books to the seminar libraries :* Since the only one trained staff member at the university library will have to look after two or three seminar libraries' work, there will be a lot of delay in supplying the suggested books to the seminar libraries. Due to this over-burden of work-load, etc. the required books will reach the seminar library after the seminar or the course is over.

3 *Position of the person who looks after the maintenance of the seminar library :* As already mentioned above, many seminar libraries will be under the immediate supervision of book-bearers in arts and social science seminars and lab-assistants in the case of science seminars under the lecturer-in-charge. In fact they are not the trained or qualified librarians. Hence the concerned incharge cannot think over anything about the improvement of the library and even if he thinks over, no one will come forward to help him with funds since everything is centralized.

4. *Correspondence :* In the centralized system of libraries much correspondence will have to be made between the heads of the departments and with the booksellers or publishers on the part of university librarian. This will increase the postage, time and energy.

Conclusion

To minimize expenditure on the seminar libraries it is a sound system for a short term. But if it is continued for a long term the concerned seminar libraries will not grow in a healthy manner and due to the lack of trained librarians in the seminar library, it will not function properly and the teachers and students will be put to a lot of inconvenience in getting the books. □

Educational Technology in India

The Present and the Prospect

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THE TERM 'educational technology', has often been used to mean different things to different people. To some, it may mean electronic gadgets and hardware like slide and film projectors, tape-recorders, vedio-players and computers, etc., for other educational technology is simply another name for audio-visual teaching aids like charts, models, educational toys, films and slides. Educational technology is, however, something more than mere teaching aids and gadgets. It may include teaching aids and electrical gadgets but is not synonymous with either of them. It may seek help from machines or mass media like radio and television but is not limited to it. In addition to all these aids, educational technology is characterized by processes, systems, management and control mechanisms.

Educational technology may be explained as well-planned utilization of total resources—human and material—for designing and implementing teaching-learning schemes for clearly defined goals. Materials like books, machines or teaching aids as well as teachers form parts of the scheme or the system but they remain parts of it. The other aspects, e.g. manner in which the systems would be operated and study of the effectiveness of the systems are also part of educational technology.

In accordance with the concept of management of learning resources for the achievement of defined goals, a variety of resources like teachers, books, audio-visual materials, mass media, etc. are utilized for maximizing learning through educational technology. "It follows that variety of strategies are needed to reach the groups which have or have not made use of the existing educational system."

Mass Instructional Technology

Technology has helped in spreading education to masses, which was formerly available only to classes. Knowledge which was available to few by way of dialogue or rare

writings was made available to large numbers with the help of printing. Printing machine is perhaps the most outstanding contribution of technology to education through which it became possible, for the first time, to educate masses. Hence, the term mass-media which includes later inventions like radio and television for this purpose. Radio and television, are now increasingly being used for education of large numbers. It is for educators to develop necessary skills, habits and interests for continued learning from these media.

Mass instructional technology in the form of radio, television and films is particularly suitable for very large but scattered groups of clientele. There have been radio-broadcast programmes on educational themes like cleanliness, hygiene, safety, biographies of great people, etc. for the enrichment of the knowledge in general. There have also been attempts to broadcast instructional programmes relating to curriculum covered in schools and some studies have been undertaken and others are under way on the functioning of school broadcasts and telecasts by the Centre of Educational Technology, (CET), NCERT, New Delhi. On the recommendations of the Working Group on Radio, set up by the CET some studies have been undertaken in Jaipur and Jalgaon, etc. about school broadcasts involving their planning, production and utilization to find out factors that influence success of these programmes or impede their progress. The findings of these studies have been shown the impact of radio-broadcast on school education.

Educational television is used for supplementing school programmes in places like Delhi and Bombay. Television and radio broadcast some programmes also for teachers weekly or fortnightly and during summer vacations. The programme for women, workers and rural clientele on radio and television and language lessons on radio are examples of their use for educating the masses. The Satellite Instructional Television Experiment (SITE), a non-formal programme of its own kind, is another example The programme was conducted in six states : Rajasthan, Madhya Pradesh, Bihar, Orissa, Karnataka and Andhra Pradesh.

The use of films in the formal as well as non-formal stream of education is known to everyone. Some films on the theme of family planning programme to popularize the small family norm and equip married couples to limit their families have been used in rural as well as urban places. Films on the theme of citizenship education, health education for improving dietary and hygienic practices, environmental education for preserving and improving the quality of environment, and social education for eradication of social evils are other examples of the use of films for non-formal education of masses. Three main functions are performed through films : (*i*) *instruction*, which may lead to gains in knowledge; (*ii*) *motivation*, which may affect or restructure attitudes and values; and (*iii*) *demonstration*, which may lead to changes in skill performance. These three functions are very important and, therefore, films can go a long way in achieving the objectives.

The effectiveness of films is dependent on their (*i*) content (film variables); (*ii*) the manner in which they are used (utilization variables), and (*iii*) the clientele to whom they are addressed (audience variables)." Film variables can be taken care of by selecting the material with reference to educational objectives while utilization variables would require teachers to become familiar with the concept and implications of educational technology.

Programmed Instructional Material

The programmed material is a carefully sequenced material in the form of a series of questions or statements. It is prepared in

such away that the successive questions are in small steps from simple to complex. Such a programme is presented by teaching machines, books or films. Its two important characteristics are that it provides immediate feedback to an active learner; and that the learner has his control over the pace of learning. A few examples of utilization of programmed instruction material are given below.

A field study in functional literacy conducted by G.H. Jamison and reported in *Aspects of Educational Technology VIII* shows the effectiveness of programmed instruction in a functional literacy project. The functional literacy project was set up by Unesco in collaboration with the Indian Government at Isfahan. The problem was to construct programmed instructional materials for use in the project and to evaluate their effectiveness. Programmed guides were prepared for courses by inspectors. They were planned in the linear format which presented factual information about teaching procedure. The objective of the guides was that they could be used by people with no teaching experience. The content of the guide constituted five inter-related components : technical, scientific, socio-economic, mathematical and literacy. Instructors were randomly assigned to two types of construction : programmed, involving the use of new instructional guides, and the traditional. A test was constructed for the purpose of pre-testing and post-testing the participants with information sampled from the instructor's guides. The objective of these tests was to find out whether information from the various concept areas was being learned to the same standard. It stood out clearly from the results that the programmed method of instruction was markedly superior to the traditional method. The programmed guide made up for the deficiency in professional competency of the instructors.

The development of a programmed reading system to improve basic comprehension, reading ability and the expressive skills for adult literacy is also reported by J. Leedham in *Aspects of Educational Technology VIII* by Baggaley, *et al.* (1975: 215). Such attempts are yet to be made in this country for non-formal education. This kind of need is evident, for example, in the Farmers Functional Literacy Programme (FFLP) in India which was designed largely for homogeneous groups of farmers for adopting and improving agricultural practices in cultivating high-yielding varieties of food crops as a part of national strategy to increase food production. Functional literacy means any literacy operation conceived as a component of economic and social development. It is related to precise collective and individual needs differentiated according to the environment and to specific economic and social objectives.

It is a joint enterprise of all agencies involved in this developmental goal—the Ministry of Education (for literacy), the Ministry of Agriculture (for training and demonstrations) and the Ministry of Information and Broadcasting (for the use of radio). Except the use of radio, no further attempts have been made to utilize educational technology in the FFLP. A publication of the Directorate of non-formal education (1977:15) points out that the coordination between departments and agencies has fallen short of the optimum, leaving a functional literacy teacher working in the isolation. It is the teacher in this kind of programme who needs help by way of feeding him with appropriate institutional materials.

Multi-media Instructional Packages

A multi-media instructional package has several components in the form of printed and audio-visual material. It is a system of optimal utilization of available resources. As example of such a model of multi-media in-

structional package is the Open University in the U.K. with its mix of correspondence courses, broadcasting, textual material, home-study experiments, computer-marked assignments, etc. Television, radio and other media are integrated into this teaching system.

A multi-media instructional package was developed in India by the CET for training a large number of primary school teachers in science partly using satellite communication. On the basis of the NCERT syllabus and the survey conducted regarding difficulties of primary school teachers in science, 12 topics were identified for developing the training package. Besides, the messages in pedagogy were also included in the package. This multi-media instructional package consisted of television programmes, radio-broadcasts, experiments in science detailed for teachers as self-instructional materials, printed study materials and tutorials by senior science teachers. The total programme was 12 working days.

A study, undertaken to evaluate this programme, pointed out towards a positive gain in the knowledge of content and pedagogy. Greater use of teaching aids, attempts at performing experiments, and involving children in the classes were found which suggested the impact of the training programme on the teachers.

The Prospect

The life-style of the people in the last three to four decades has changed tremendously. This is largely because of the advancement of technology. Quick transport and means of communications have helped people to become more mobile, travel comfortably and communicate easily. The availability of electrical and mechanical gadgets have increased the opportunities for more entertainments, ease and comfort in life and lead a richer and better life.

When other aspects of life have changed the educational system cannot remain aloof and remain the same as it was several years ago. It will have to take help from technology like several other fields have taken help for improving in their own area. This is, however, not the only reason for creeping technology in education. Explosion of knowledge is another reason which is the effect as well as the cause for more technology to disseminate it, to lift it for one's requirements and to require it according to one's needs. Increase in population and, therefore, needs of quantitative expansion and qualitative improvement are other pressing factors which demand increasing use of modern technology in education.

Then we have universalization of elementary education and adult education. Our country is facing a big challenge of making education universal as well as relevant to the community according to its felt needs so as to help people in improving their standards of living. The gigantic task of making education universal is clear from the number of illiterate person which has risen from 247 million in 1951 to 446 million in 1981. According to the census of 1981, only 35.8 per cent people were literate while 64.2 per cent were illiterate. The problem is more acute because these people mainly belong to rural areas, urban slums, tribal areas and hill areas and, therefore, it is more difficult to motivate and bring them to schools. Progress in these areas has fallen short of the set targets As the time passes, these tasks become more difficult and far-reaching A large number gets added to the category of illiterate than pass through the literacy programme each year rendering existing corrective measures inadequate. Efficient plans and ways of their implementation are required for attaining desired goals in a reasonable length of time. Educational technology can greatly

elp planners and implementers in these irections.

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Educational News

Silicon microchip

But, before the benefits of the new teaching methods could be consolidated, and before computations of fractions could make way universally for the decimal point, the ubiquitous silicon microchip had risen on the horizon in the field of technology. Education is about to undergo a second revolution, this one unparalleled since Gutenberg's movable type. The invention of the pocket calculator has, with one stroke, made obsolete the books of tables and the slide rule. Swifter, cheaper and a million times more accurate, the pocket calculator is having a profound effect on the teaching of mathematics, even at primary school levels, in the developed countries. Children are taking to pocket-calculators like ducks to water. Much to their delight, a lot of drudgery has been taken out of mathematics. In addition, portable computers (now within easy financial reach of every home and institution) help kids with all kinds of mathematical problems, including geometry and algebra, in addition to the usual computations.

Society's needs

In the electronic age of today, when most human activities, including sensory feedback and logic are fast being replaced by the mighty micro, occupations require greater degree of originality, insight, judgment, initiative and understanding Society is becoming extremely competitive, and there is a greater demand for those who are creative and have a highly developed problem-solving ability.

A young man or a woman of the twenty-first century will be living in a "push-button palace," travelling between planets and engaging in activity unheard of today. Every sphere of life, home, work, school, leisure, and so on, will entail a programmed computer. His need for tinkering with technology and rational reasoning will be much greater than his counterpart's today. Teaching of mathematics will play a very vital role in training his thought processes. Emphasis will have to suitably shift in schools to cater to the needs of a highly automated way of living of the future generations.

India will fall in line, sooner or later. One of the aspects of tomorrow that requires serious contemplation is the change in the mathematics syllabus, and subsequent teaching methods to fit in with the fast changing world of technology.

[Shamlu Dudeja : *Hindustan Times*, 17.1.1983]

Improving work education at general schools in the USSR

To bring the content of instruction into line with the social functions of the school, with economic requirements and trends in the development of culture, science and production is a major and constant task of education. Responding to the decisions of the 26th Congress of the CPSU and the resolution adopted by the Party's Central Committee and the USSR Council of Ministers on the further improvement of instruction and upbringing at secondary schools and preparing pupils for future work (1977), the Soviet school, which is expected to provide general, polytechnical and work-related education is making a radical turn towards improvement of work education During the term of studies, secondary school-leavers are expected to acquire a thorough knowledge of the fundamentals of humanities and sciences, to develop skills for work in the national economy, and to come close to mastering a trade or profession.

At the present stage of scientific and technological progress and under conditions of mature socialism, new work instruction curricula are required for all the forms of the general school To that end, the Research Institute of Work Instruction and Vocational Guidance, USSR Academy of Pedagogical Sciences, has carried out theoretical and experimental research. This intensive research has been conducted for the past few years with due account taken of the experience gained in work education at the Soviet schools since its inception. The draft curricula were discussed jointly by many teachers, specialists in teaching methods, scientists, and economic experts. The new work instruction curricula have been approved by the USSR Ministry of Education. They are based on the Marxist-Leninist ideas of polytechnical education and combining education with productive work with due account of the outlook for the USSR's economic and social advancement. As distinct from their forerunners, the new curricula provide a better educational, polytechnical, practical and vocational thrust for work instruction and have been somewhat lightened by the deletion of excessively complicated and less relevant material. The education material is logically consistent, with a good degree of internal continuity, at all levels of education (1st-3rd, 4th, 8th, 9th and 10th forms). Stress is laid in the curricula on socially useful productive work (specifically in the 7th, 10th forms) combined with education and oriented on communist upbring.

In the new curricula, work instruction is differentiated in the following way. In the 1st-3rd forms all children receive primary general work training in accordance with a programme applied throughout the country. In the 4th-8th forms, depending on the pupil's wish and the school's industrial environment, instruction is given in a particular type of work-technical, services or agricultural which corresponds to the division of the economy into three major spheres: industry, the services and farming. This makes it possible to prepare pupils for doing productive work in accordance with their abilities (10 hours during a school year the 7th and 8th forms).

In the 9th and 10th forms the content of work instruction is differentiated according to the sectoral division of social labour: pupils may study according to their wish, for instance, fundamentals of metalwork, power engineering, radioelectronic, field-crop cultivation, mechanization of farming, etc. This approach enables them to extend their polytechnical idea of modern production and take part in specific work in the area of production. In the process of work education, specific didactical and upbringing tasks are solved at each of the above-mentioned age levels. At the same time, a scientific elaboration of the

educational foundations of building a work instruction system has made it possible to formulate universal tasks for forms . development of diligence and a communist attitude to work, high ideological, political and moral qualities of personality, and a careful and thrifty attitude to socialist property and nature, the development of work skills and habits and acquisition of scientific and technical knowledge required for involving pupils in socially useful productive work which will bring them close to mastering a particular trade or profession; extension of polytechnical outlook and consolidation of the knowledge and work habits obtained during the study of the fundamentals of sciences and humanities; promotion of creative abilities for work in combination with preparedness for practical work, extensive study of widespread trades and the shaping of stable occupational interest.

In keeping with the tasks listed above, curriculum structure and contents have been developed so as to give due emphasis to pupils' practical work and their socially useful productive labour (from 70 to 80 per cent of all the time devoted for instruction). The curricula name the knowledge and skills to be acquired by the pupils of every form and specify the content of scientific and technical knowledge, practical laboratory and production training work, and excursions, and recommend approximate objects of useful productive work At the same time due account is taken of the regional requirements, depending on the specific details of the economic development of a particular region, as also an alternative approach allowing for a partial change of the subjects of practical work, excursions and objects of production work depending on the local conditions around a school. When such a change is made, the main part of the curriculum (about 80 per cent of educational material) should remain unchanged. This enables schools to adopt a more flexible approach in using their concrete opportunities and conditions in the multinational Soviet State and meet the demands to work instruction that are universal for the country as a whole. In introducing and implementing the new curricula schools receive extensive aid from the main enterprises, collective or state-run farms and various establishments and organizations.

The research institute has started experimental testing of work instruction conducted according to the new curricula This work will be continued through 1985 in various Union Republics, covering a sufficient number of schools and interschool work instruction centres. The first stage of experimental testing of work instruction curricula has now been completed and the results of the experiment have shown that the principles underlying the new curricula are acceptable, but some of the study themes and practical laboratory assignments need improvement and an optimum balance needs to be established in the time devoted to the study of theoretical knowledge and that spent on practical work. The new content of work instruction help better to solve the common task of shaping a harmoniously developed personality

(Abstract of V A. Polyakor's article published in *Innovation*, Sept.-Dec. 1981)

Indian Philosophy of Education: Some Issues

INDIA has a long history of not only philosophical thinking but of education as a social institution We had well developed universities as early as the Buddhistic period. Our Ashram type institutions had even an earlier tradition. The main theme of study in these ancient seats of learning was 'philosophy'. It may appear to be strange that unlike West.

we in India, could not develop 'philosophy of education' as a distinct branch of philosophy. The reason seems to be that Indian traditions never drew distinction between life and education and thus philosophy of life was philosophy of education. Education was considered to be an instrument for developing a cultured life and ultimately a good life Philosophy also aimed at developing in man qualities of rationality, wisdom and spirituality. At present, in the universities of India, we confine to teaching of Western philosophies of education because we do not have any philosophical system pertaining to education, which may be called as Indian. As an apology to Indian educational philosophy, we either teach history of ancient education or teach about the educational thoughts of some Indian thinkers like Gandhi, Tagore, Vivekanand, etc.

The present trend in Indian education is towards empirical or experimental researches and that too is a piecemeal treatment. A comprehensive view to solve educational problems and to develop indigenous system befitting to Indian conditions is very much lacking Therefore, the need of the hour is to focus our attention on the following issues.

Nature of Western Thought

(*i*) The impact of Western philosophy of education on Indian system of eduation has gone so deep that it has lost its real and genuine temper. With this, a spirit of alienation has crept in. Consequently, it has resulted into a cultural or value conflict in our children and teachers Value system has undergone a radical change and there seems to be mischannelization of human resources Besides, if the focal point of education is accepted as the child and his natural growth even then, it will be unpsychological if the child is to be educated in a foreign frame of reference. For proper education, child needs to be conditioned or educated through a local and indigenous system having evolved out of a sound philosophy of education

(*ii*) Western philosophy is indiscriminately matter-oriented whereas Indian philosophy is spirit-oriented Correspondingly philosophy of education drawn either from material standpoint or from spiritual one, has its own educational implications Western philosophy having base in matter, does not fit into the basic nature of Indian thought. Especially after independence, there has been a natural urge and need to evolve an Indian system of education around a common frame of reference drawn from the spiritual core of Indian thought Indian national system of education having deep roots in Indian traditions and culture, should have been the work of educational thinkers after independence But we could not do so due to inertia and lack of confidence.

(*iii*) In Western thought, child is accepted as a biological unit. His behaviour is treated at par with animal instinctive behaviour. Growth or development through education is taken as a process of training from animal behaviour to social behaviour But in Indian thought, child has been accepted as divine. The whole educative process is designed around this concept. It has entirely different educational implications in a system. Sri Aurobindo's concepts of spiritual evolution is an example to this direction. Many issues related to these two traditions material and spiritual in philosophic thought and educational process, will have to be thrashed out on the basis of empirical experience or otherwise.

2. *Nature of Indian Thought*

(*i*) Do we need to have an independent school of thought on Indian philosophy of

education in the midst of contemporary Western thought? Can a conceptual framework of IPE in the background of rich heritage and culture be developed? As philosophy of life and the scheme of education are always drawn from a socio cultural background of a country so India having a rich cultural heritage, should have evolved her own model of philosophy of education.

(*ii*) History has always been the testimony of the fact that Indian thought has been all embracing and encompassing. It had universal and eternal constituents of human thought without specifying any narrow demarcations of creed, religion and other man created differences. Main attributes of Indian thought have been flexibility, evolutionary, psychologically sound, empirically tested and universal in appeal.

(*iii*) There has been a singular emphasis of education commissions and committees on the cultivation and development of social, moral and spiritual values through school and university education. It evidently reflects the inner recesses of Indian thought in education. But this mere whispering in this context, cannot yield any tangible results unless concrete consistent and coherent thought is identified in education. Sound Indian educational system can only be structured when the real spirit of Indian thought is clearly defined and its components are delineated.

(*iv*) Ancient system of education had a local bias and social relevance. It could meet the natural, universal and eternal urge of man. In this regard, it can be said that Indian could not develop a national system in the literal sense. However, whatever educational system is in vogue, it does not fit into Indian temperament and attitude. It is because it is drawn out entirely from a different set of cultural values and human experience.

(*v*) Six systems of Indian philosophy have provided different explanations of man and his relationship with cosmos. But no educational philosophy has been worked out of these six systems. Can we say that these six systems could only confine to the traditional thought and as such no philosophy of education can be drawn Or can we say that some fruitful attempts can be made to work out a systematic scheme to this direction.

(*vi*) Western general philosophy determines the philosophy of education or theory of education under fixed categories like ontology, epistemology and axiology. Can we evolve an IPE from Indian philosophy on the same criteria or another criteria are to be fixed? This issue can be resolved while exploring the traditional categories of classification of thought of Indian philosophy under each system for developing IPE or a common criterion can also be accepted which may determine different aspects of IPE and other issues of educational like aims, curriculum, methodology, discipline and role of teacher

(*vii*) Indian philosophy seems to be an abstract field of thought for a common man to understand and the same can be true of IPE for an average teacher. Can we develop a workable language in IPE to propagate its dimensions and principles to teachers so that they can understand them in a proper perspective. A simple and intelligible language in this regard, can be developed. It will enable the teacher to revive and revitalize an Indian thought and put into practice.

[Report by Dr. K.K. Sharma, DERS, NHU; Shri R.K. Sharma, SIAE, Kohima and Shri L.K. Sinha, SCERT, Kohima] □

Book Reviews

Teaching of Science in Secondary Schools

National Council of Educational Research and Training, 1983, pp. ix + 250

THE book has been prepared by a project team, consisting of some selected faculty members of the NCERT, which was assisted by two British experts, Dr. C R. Sutton of the School of Education, Leicester, and Dr. John O'Head, Chelsea College, London. The three editors of the book are drawn from three main disciplines of science, namely, biology, chemistry and physics. There should be little doubt in the minds of readers about the usefulness of the book which has been prepared by a team of selected experts of the NCERT.

It is a practice in the teacher education colleges to teach the methods and techniques of teaching science in a theoretical framework. The curriculum framework for teacher education developed by the NCERT recommends that the methods of teaching should be taught in the teacher education colleges along with contents of science which may serve as an illustration of particular methodology of teaching science. In the absence of sufficient well-designed illustrations, the methods of teaching science, as being taught in the teacher education colleges, become ritual. Experiences of teacher-educators bear evidence that the entrants of these institutions for their pre-service training have extremely poor knowledge of the content of science which they are supposed to teach in secondary schools. On the other hand, the curriculum of these colleges presumes that the student-teachers know the contents and they will decide the techniques and approaches for teaching the particular topics if they have knowledge of the underlying principles of the methodology of teaching science. The curriculum is science-based, this assumption has done more harm than good to the cause of science teaching in this country. The recommendations of the curriculum framework for teacher education to integrate content and methodology in the training of teachers deserve wide acclamation.

Following the guidelines of the NCERT's publication, *Teacher education curriculum; A framework*, the colleges of education in India revised their courses of studies for inservice training of teachers and made provision for teaching content and methodology in an integrated form, but the task of achieving the aim of integrated curriculum remained unfinished in the absence of any textbook dealing with the matter in an integrated form. Inspired by the Science Teacher Education

Project (STEP) of Great Britain, the NCERT appointed the project team which prepared the book under review. The team has done good job in presenting only those units of science which are useful for secondary school teachers. The contents of each unit of science have been discussed in relation to appropriate methodology to be used for teaching a particular content in a classroom situation.

The joint sincere efforts of the project team have succeeded to a great extent in translating theory into practice. The first two chapters of the book discussed some ideas on the nature of sciences and the aims of teaching science. The third chapter gives an outline for using the book and the remaining 24 chapters provide guidelines for work of student-teachers while they are in the colleges of education. Of the 34 chapters, 13 have been devoted to biology, 10 to chemistry, and 11 to physics. Almost all the topics to be taught to secondary school students have been included in the book. It is heartening to note that the team has, with great success, dealt the content and its methodology in complete harmony. The integration of content and method has also been maintained at all the three stages of organization, namely, content, school activities and student-teacher assignment.

In presenting the content, the objectives of a particular unit have been listed first. The relevant skills required for a particular unit have also been properly emphasized. After giving the main concepts needed to understand the content, a check-list of the concepts has been presented and the reader, after going through the check-list, may consult the text-book, if so needed There is no doubt that the science teachers will find in the book ample opportunities to make the teaching of science extremely exciting and challenging. Not only this, there is also sufficient scope for ingenuity, imagination and improvisation.

The usefulness of the book has become more pronounced by suggesting a number of assignments for student-teachers within each topic. Judged from the existing situation, student-teachers in teacher education colleges vile away most of their time in unproductive activities. There is little scope for improvisation and imagination in the existing teacher education curriculum in science. In such a situation, the suggested assignment will provide the student-teacher an opportunity to use their time in developing desirable skills and attitudes necessary for a good science teacher.

A recent survey of the teacher education colleges has revealed that a good number of colleges do not have auxiliary tools for working with science. Nor do they have good teacher-educators with good academic background in science Such situation is appalling and the success of this book will depend upon the availability of good science teacher-educators and other ancillary services for teaching science.

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Letters to the Schools

J Krishnamurthy. Krishnamurthy Foundation Trust Ltd., Madras, 1981, Rs. 16.00

THE book under review is a collection of letters written by Mr. J. Krishnamurthy to schools managed by the Foundation bearing his name. These schools in India, USA, UK and Canada are all attempting to develop, according to him, "not only academic excellence but the cultivation of the total human being."

In a series of fortnightly letters from 1 September 1978 to 1 March 1980, Mr. Krishnamurthy expounds his views on a variety of topics which would be of interest not only to

teachers in the schools mentioned above but to educators anywhere who are concerned about the process of education As the title of this review may indicate the thoughts and ideas expressed in hundred odd pages that constitute this book do not conform to accepted educational theory or practice. Even the definitions of some of the terms used by this writer (e.g intelligence) may not find acceptance in any formal writings in the field of pedagogy. Nonetheless, many who are concerned with education and teaching may find much to stimulate them though they might find little to agree with For those who have had opportunity of discussing or talking about various problems in small groups with Mr. J. Krishnamurthy (as it happens in gatherings at Rishi Valley and I presume other such schools too), listening to him must have been about the nearest experience one could have of witnessing a demonstration of the Socratic method. Such a feeling for obvious reasons is not encountered when one hears him at his public lectures In these letters, the author seems to capture some of that flavour of a dialogue at the 'Academy'.

If education is concerned with the development of a wholesome personality, schools should help a student to flower naturally Narrow specialization, compulsion, persuasion and all attempts at conditioning are, according to Mr. Krishnamurthy, necessarily restrictive or stultifying factors in this process of the natural unfolding of one's potentialities. Thus according to the author a flowering of individuals can only be possible in an atmosphere of freedom. This insistence on freedom is a recurring theme in many of the letters. It would involve a total abjuration of attempts to instil fear in students or the use of any form of compulsion or persuasion; as a corollary traditional competition amongst them would also have to be discarded. Naturally these views will be quite alien to those amongst us who have hard and read about methods to motivate students by suitably modifying the environment or using rewards and punishments with discretion to achieve this purpose. "We have been conditioned to accept the maxim that conflict and competition ensure growth and examples are cited to exemplify this, e.g. a tree struggling in the forest for light, a new born struggling for breath, etc. We have accepted for generations that there is no way of life bar that of conflict—hence a suggestion that life is possible without it is rejected," is Mr. Krishnamurthy's answer to those doubting individuals who wonder if we can ever give up the traditional methods of comparing students, grading them, rewarding and punishing them in order to promote efficient learning.

The word "more" is always comparative, he writes, as also the word "better". "Can the educator put aside all comparison, all measurement, in his teaching ? Can he take the student as he is, not what he should be, not make judgments based on comparative evaluations," asks Mr Krishnamurthy. He is of the view that when teachers put aside comparison and measurement, then they can be concerned with the student as "he is" and hence the teacher-student relationship can assume totally different directions. "Love is not comparative—comparison and measurement are the ways of the intellect and hence divisive. The whole atmosphere of the school undergoes a change when there is no sense of competition, comparison," he states in another letter. Educational theory and research assert that competition. assessment and evaluation undoubtedly have a role in the acquisition of knowledge; however, it may be debatable whether they are of equal value in the promotion of human relationships and the "art of living", which Mr. Krishnamurthy asserts, must be the responsibility of every teacher.

In another letter he has posed the question as to why human beings do not feel responsi-

ble for others? Most humans are committed only to themselves according to Mr. Krishnamurthy. Selfishness is manifested in a variety of human actions, striving for power and status, for love and affection and any number of other activities. Schools often encourage these strivings for self-enhancement by emphasizing performance at exams, sports and all the other activities that they offer. If such tendencies are fostered in schools it may be difficult to develop a sense of responsibility for others and our environment And personal relationships as a result may tend to get warped and fragmented, confining themselves to cover groups or cliques or the selected.

In answering the question why people conform to traditions, Mr. Krishnamurthy says that it is usually due to these individuals seeking security. Even those who appear to be non-conformists by questioning exisiting customs, traditions and rituals often adopt other such modes of behaviour. He maintains that there are no "good" or "bad" habits and that all such behaviours as also indulgence in custom or ritual results in a degeneration of the mind. One can imagine a number of parents and teachers throwing up their hands in horror or exasperation on reading this. For after all, is not one of the purposes of infant and child training, the instilling of "good" habits ? To such a question Mr Krishnamurthy would probably reply, "One can do the same things everyday without it becoming a habit when there is an awareness of what is being done."

There would generally be more agreement with Mr. Krishnamurthy's view, "that daily life is a constant process of learning and action in relationship without strengthening the residue which is memory." This opinion and the comment that, "Observation from moment to moment may be an alternative to traditional methods of learning," may indicate his advocacy of discovery and enquiry methods instead of the more conventional techniques. Again many teachers would with some justification submit that heuristic methods have their limitations and may even be impracticable in the conditions which are encountered in the large mass of schools in our country.

Few will dispute the contention that there has been a deterioration in the quality of life in this country and a consequent degradation in the standards and environment of our schools and other educational institutions. There are many who are of the opinion that this rot in our educational system cannot be set right by merely tinkering with its structure or by providing a greater quantity of inputs of all kinds; such individuals may be of the opinion that what may be required is a total overhaul, such as would occur if there was an upheaval in the country similar to that which took place in Russia or China. Mr. Krishnamurthy has suggestions for schools which provide an alternative method based on awareness by the individual or himself and his environment and a re-examination of traditional learning techniques. His hope probably is that even in a rotten world, "goodness", even if it exists only in certain cases, may filter across a wider area. Considering the ineffectual results in this country of the filtration theory when applied in the later periods of the last century and in the early periods of this one, there would again be many who would doubt the occurience of such a possibility. At the beginning of this review, it was mentioned that there is much that many will disagree with in reading through these series of letters. But there is also much that could stimulate a re-examination of our lives and practices.

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From the Librarian's Desk

Bellack, Alans and Hersen, Michel
Research and Practice in Social Skills Training. New York, Plenum Press, 1979, pp. 358.

THE publication describes the nature of social skills, their role in psychopathology, and how they are assessed. Leading researchers in the field discuss the use of social skills training with various clinical populations as well as the current state of the art The volume identifies strengths and weaknesses in current training programmes, citing numerous problems, unanswered questions, and faulty conclusions. Future directions for research are also discussed.

Blumberg, Rhoda Lois and Dwaraki, Leela
India's Educated Women: Options and Constraints. Delhi, Hindustan Publishing Corporation (India), 1980, pp. 172.

THE authors have attempted to answer such questions as : What kinds of options are created for Indian women when they attain higher education ? How are they constrained by traditional role expectations governing marriage, education and work ? How do they react to their changing roles ? The authors have combined the findings of their 1966-1967 study of Bangalore women graduates and post-graduates with new data obtained a decade latter They contacted almost one-third of the women they had interviewed. Unlike her rural sisters, the urban educated woman was a relatively new entry into the world of paid employment in 1966-67 Despite her general acceptance of customary norms and obedience to the family, the working woman was thought by many to be disadvantaged in the marriage market. By 1977, employed middle class women are as much taken for granted phenomena, and generally men seem to have developed a craze for working brides The jobs held by sample members continue to be limited, with teaching, medicine and clerical work. However, some women have attained the Ph.D and others are doing research. The largest proportion of the follow-up groups did marry; some are beginning to question the traditional household division of labour which puts double burden on the working wife.

Ghosh, S.K.
Women in Policing. New Delhi, Light & Life Publishers, 1981, pp. 155.

THE idea of women in police force seemed very strange in the past but today it has be-

come common place around the world. In this book the author provides an insight into the vital police work of women in 68 countries around the world. It analyses many issues surrounding the question of whether or not woman are well suited to fulfil policeman roles. It covers the statistical profile of the police woman, salaries, education, and the cultural norms, and psychological self-concepts that have produced the problem confronting the police woman.

Judge, Ken (Ed.)
Pricing the Social Services London, Macmillan Press, 1980, pp. 175.

It examines dispassionately objectives of charging for social services, the implications for different services of using them, and the consequent impact on the consumer or clients. The first three chapters provide an introductory survey of a range of contemporary pricing issues from education to water and local planning, and introduce some of the most important economic principles of pricing. The following three chapters consider different aspects of the use of the price mechanism in representative public services, the transport sector, the national health service and local authority social services The concluding chapter considers some widely sustained universalists' arguments about the validity of using means tests and charges to regulate the delivery of social services in general and reviews the evidence available from empirical testing of such propositions in the context of all the school meals service.

The publication provides a new and long overdue examination of the theoretical objectives and practical implications of using the price mechanism to pursue the goals of social policy.

Locurto, C M., Terrace, H S. and Gibbon, John (Eds)
Autoshaping and Conditioning Theory. New York, Academic Press, 1981, pp. 313.

The publication focuses on the comprehensive review of the impact of autoshaping on conditioning theory Autoshaping constitutes a most dramatic advancement in experimental psychology in the past decade, a development that has provided new opportunities for study of the interactions between Pavlovian and operant conditioning. Autoshaping has also encouraged the development of original experimental procedures and new theoretical models of conditioned behaviour. Autoshaping and conditioning theory is organized to reflect this wide ranging influence. Separate sections evaluate the consideration of autoshaping to our understanding of biological, associative and temporal factors in conditioning. Within each section, experimental developments since the inception of autoshaping research are surveyed in detail. Contemporary theoretical ideas are examined in the light of these data, with discussion of several new models. Autoshaping and conditioning theory is calculated to help as a professional level reference for graduate students and psychologists interested in learning theory, animal behaviour, biological/evolutionary influences on learning.

Mehta, Usha, Billimoria, Rosebeh and Thakkar, Usha
Women and Men Voters: The 1977-80 Experiment. New Delhi, Election Archives, 1981, pp. 290

The book reviews the performance and non-performance of the governments and also promises made by Congress-I party in 1980 particularly with regard to amelioration of the lot of women. It seeks to study how and why all governments failed to redeem many

of their promises with men and women. The role of the President has also been discussed in this regard.

Pathak, Jyoteeshwar and Sharma, D.C
Cultural Heritage of the Dogras. New Delhi, Light and Life Publishers, 1980, pp. 177.

THE book highlights the heroic deeds of Dogras on various fronts during the two World Wars and their excellent role in defending the country after independence It attempts to present a coherent and conjointed account of the history and culture of Dogras and to provide various nursing links and little known facts about Dogras.

Pocock, Douglas C.D. (Ed.)
Humanistic Geography and Literature : Essays on the Experience of Place London, Barnes and Noble Books, 1981, pp. 224.

IT is a collection of essays written by distinguished geographers, each writing on a particular theme, examining how creative writers have handled space and place and what geographers can learn from a writer's treatment of the environment. The geographers bring their own perspective into the field of literary criticism and attempt to add a new dimension to the interpretation of literature.

Sardar Patel Institute of Administration, Madras. (Ed.)
Administration and Politics in Modern Democracies Allahabad, Chugh Publications, 1976, pp 356.

THE book is a collection of essays contributed by eminent persons like V. V Giri, Zakir Hussain, Chester Bowles, Paul Gore Booth, Ruthnaswamy and K.P S. Menon. They have shed light on different facets of administration and politics in India, viz. democracy, welfare state, planning, community development, panchayat raj, socialism, democratic administration, dictatorship, administrative systems in other countries, personnel administration, etc.

Shyamlal
Caste and Political Mobilisation, The Bhangis. Jaipur, Panchsheel Prakashan, 1981, pp. 134.

THE publication focuses on the study of Urban Rajasthan Society built upon the pattern of social and political mobility among a lower cost—Bhangi—the community of scavengery workers, who live in the city of Jodhpur, Rajasthan The study covers the early efforts of scattered Bhangis to move first on social front and later on turned to political sphere which begins from 1923 and concludes when the Sixth Lok Sabha election was held in 1977. It records and presents socio-religious conditions of the Bhangis, development and organization of reform groups prior to 1947.

K. L. LUTHRA □

Journal of Indian Education

Highlights of March 1983 Issue

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Problem Levels and Personality Patterns — *(Smt.) R K. Arora*

Family Background and Military Leadership Qualities — *R.P Gautam*

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JIE invites articles/papers on the impact of educational research on classroom practices/ policy decisions. Specific examples where this impact is apparent may be given

GENERAL EDITOR

Futurology: a Science or a Hoax

INDIA being what it is things get easily muddled here. We have a long tradition of astrology—a deviant from astronomy. We love to know what would happen next. In an uncertain world even a little information is a big help. Even if what we have been told does not come to pass we take it that the cause lies not so much in the unpredictability of future but in the calculations of the astrologer. It is all the more ludicrous when we start defending our astrologer on one ground or the other. In Europe also astrology is catching on. Computers match horoscopes and a whole array of astrologers are busy in their hocus-pocus. In almost the same vein people have taken to futurology. They believe like George Orwell and H. G Wells and their tribe that future could be predicted. Through their tainted glasses they have tried to paint the picture of society to come and like their astrologer friends their predictions also went wry. But this has not deterred anyone because people continue to behave as though nothing has really happened. In education too there are signs that futurology may become an important segment of perspective planning. The government of India has also, it appears, taken these people rather seriously. They expect this cadre of people will be able to delineate future course of action But one suspects that like astrologers they may also project future according to their own level of training and understanding. There is a possibility that one may not be able to draw a line between downright speculation and scientific calculation. If at all the futurology should be a science of assessing future requirements, it is desirable that one made a careful analysis of trends and undertook manpower planning knowing full well that the latter has also rarely come up to the real expectations In socialist democracies where special emphasis is laid on manpower planning futurology is really a part of perspective planning. Barring a few deviations their assessments are realistic. The unpredictable in their case constitute unknown variables. In fact what is so essential is the ascertaining of these unknown variables Once they are determined the rest can be computed so easily. In the non-socialistic democracies of the West governments engage themselves in measuring future needs through researches in the universities and their own specially constituted departments. Education is a technique of human

engineering with whose help they prepare skilled citizens for tomorrow. They are conscious of the fact that skills like goods and material are also saleable. Our education is still looking backward and drawing inspiration from an unrealized past. It has yet to come and measure up to the responsibilities of the present Therefore what we need to arrive at is the frame of 'here and now' The question of looking ahead does not arise at all. What then is the role of futurology in the Indian context? Whether a science or a hoax the entire issue is so irrelevant. Let us hope we realize this and prepare ourselves accordingly.

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Teacher Effectiveness in Schools

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EFFECTIVENESS, implicitly, incorporates various connotations in its meanings. This concept, when analysed, unfolds various dimensions. As such, a study of effectiveness reveals vital issues in the understanding of human beings. An ideal effectiveness is always considered to be the apex of perfection to be desired and worked for by all of us in our respective areas of engagements. This utopian reach is characterized by optimum levels of efficiency and productivity on the part of the workman. In psychological terms, it is the height of maturity and learning in the life span of an individual. At this stage, the person is capable of channelizing all his energies in his strides towards the cherished goals. Moreover, by this time, he becomes competent also to turn stumbling blocks into stepping stones to success.

Effectiveness may be taken as one's hold on the circumstances as well as on himself, befitting the best of his total adjustment. It is related to his power of influencing the environment. In this context, effectiveness is known to be spontaneously accepted prevalence (dominance) of one's personality by his co-workers, subordinates and all that which falls within the net of his 'life space'. In the process of interaction, person's enduring impressions left on others, bear testimony to his effectiveness In this realm, effectiveness is considered to be the finest trait of a person. As an attribute, it represents his personality in the best of his form. It stands for the style of our living. It is related to both the means and ends of our entire spectrum of activities and occupations The shape of things coming into being by virtue of our thoughts and actions are associated with our effectiveness in life. It is the yard-stick of our constructive thoughts, purposeful actions, influential impact and successful pursuits. Briefly said, effectiveness is the index of a successful life.

Teacher's Effectiveness

The effectiveness of the process of educa-

tion has been squarely acknowledged to depend upon the effectiveness of its teachers. It may not be construed in any way as an exaggeration to remark that it is the teacher's effectiveness which is primarily perceived as the effectiveness of any system of education. It is in this broad framework, that the question of teacher's effectiveness comes under the purview of a detailed X-ray. The efficiency and competency displayed by teachers in their leadership roles evaluate their effectiveness. This leads us to enunciate that teachers' effectiveness specifies their capability to work for the achievement of the aims and objectives of education and to further strengthen their teaching profession in this endeavour.

The teacher involved in the process of education, entails along with him two essential elements, i.e. pupil and the curriculum. The curriculum lays the track on which the teacher guides the destiny of the development of children. As such, these three constituents enter into the phenomenon of interaction ; they act and interact with each other and the consequent product is credited to the effectiveness of education. Teachers' effectiveness, as noted earlier, is to be identified in his role and contribution to the product of education. It is necessarily determined by his person which is further conditioned by pupils and the curriculum. For a scientific probe into the teachers' effectiveness, we shall have to simultaneously analyse all these three elements involved in the process of education.

Determinants of Teacher's Effectiveness

It emerges from the preceding discussion that the following three elements should be examined as the determinants of the teacher's effectiveness : (1) Teacher, (2) Pupil, and (3) Curriculum.

1. *Teacher*

In the determination of his effectiveness, teacher himself, beyond any doubt, plays a decisive role In fact, some people go to the extent of holding the teacher alone responsible for whatever effectiveness is found in the profession. The teacher's role may further be studied under : (*a*) personality components, (*b*) behaviour, (*c*) qualifications, and (*d*) job satisfaction.

(*a*) *Personality components :* In the teaching-learning situation, teacher has been very rightly recognized to occupy the pivotal position. Learning aims at the moulding of students in a preconceived desired direction. This modification of behaviour is ultimately to be found in healthy attitudes, good habits, standard values, fine temperaments and as a whole in the sound character development of students. That is to say, learning is to facilitate the students to imbibe a character which should reflect their personality as enshrined in the aims and objectives of schooling, i.e. education.

At least within the school periphery for the children, the teacher is the recognized organizer of learning environment and stimulant conditions. They are expected to create the 'set-up' to enable the students to 'pick up' the goals of learning. In this performance of their duty, very obviously, teachers can't be successful, i.e. effective, merely by telling the students whatever is written in the books. Perhaps this 'telling' business can be successfully carried out by any one capable of reading the materials of prescribed course of studies. But the teachers are skilled professionals in education, whereas others constitute the unskilled labour force who have intruded into the teaching profession. Teachers in the true spirit of their professional duties are called upon to make this 'telling' only a means to achieve the ends of character build-

ing of their students. Truly, this is the great task facing them, which earns them the title of 'builders of the nation.'

Character formation is a slow and steady process of assimilation of desirable attitudes and healthy values in one's personality structure. This process is explicitly important for the impressionable minds of children in their formative stage of character development during school-going age. The inculcation or the modification of attitudes and values in one's character is a matter of reinforced practice. The reinforced practice follows the nature of experiences one is exposed to or one comes across in one's daily routine. Moreover, the experiences are found to be more vulnerable and penetrating when they are actually provided by someone through his mode of living. The concrete and visible experiences are life-enduring. Bernard (1961: 445) has rightly remarked :

> Each teacher must see to it that individual responsibility is assumed for the enhancement of the profession Our first responsibility is to develop those personal traits that will count towards maximum effectiveness. Friendliness, enthusiasm, optimism, initiatives and resourcefulness are worthy of continuous cultivation.

Teachers by virtue of their dominant position in the teaching-learning situation, leave a formidable impression on students. Their personality remains the mainspring of vital experiences for children. The effectiveness of teachers in the character formation of students, essentially depends upon the teachers' own character. The truth of the maxim, 'Example is better than precept' goes absolutely unchallenged and true here than anywhere else Teachers need fundamentally to practise those traits which the society wants to instill amongst the upcoming citizens through the schools. To present children with a pattern of traits worthy of emulation, teachers will have to observe the highest standards of conduct in public and private life. In this stream Adaval (1979: 89) may be noted writing as :

> Teaching effectiveness cannot be judged in a vaccum. It is to be related to the achievement of goals, envisaged in terms of the aims of education embedded in the nation's philosophy of life. A teacher's success depends largely upon the capacity to reflect the national philosophy in his own life and action, and to initiate the child into it.

(b) Behaviour of teachers : Behaviour is the mirror of personality. It is the personality in action. Ryans (1960), after an intensive research in the field, has concluded 25 points of effective behaviour and correspondingly has arrived at the same number of points of ineffective behaviour of teachers. Witty Paul (1950) has also analysed the behaviour of effective teachers as expressed in the words of their successful students. Kaul (1974) has studied the issue in the context of popular and unpopular teachers. Anand (1971) has studied the behaviour of teachers as liked and disliked by students. Perhaps the above-mentioned researchers have taken a leaf from the words of Bernard (1961 : 437) :

> It is difficult to define the successful teaching personality. The problem is not answered by resorting to precisely defined list of isolated traits. A more fruitful approach to finding the answer to the question is to abandon the trait concept and examine teachers at their work.

The teacher's relationships with his pupils are of prime importance in effective teach-

ing. The research findings uniformly confirm that sympathetic, kind, loving, affectionate and impartial behaviour of teachers towards the students establishes rapport with them and is a probable factor in teachers' effectiveness. Teachers are required to be acceptable to their students. To be effective, teachers have to show due 'respect' for every child with concern for the uniqueness of each of them Conversely, rude, whimsical and unpleasant behaviour on the part of teachers, is a formidable barrier between them and their pupils. A constantly sound and warm attitude of teachers to students is essential for a purposeful learning-teaching situation. Working on the interests and aptitudes of students and initiating their motivation for learning, ensures teacher's effectiveness.

The teacher has been very rightly seen as a group leader for students. He is to demonstrate his leadership role in the right spirit of democratic principles. Being sought by his students for guidance to make appropriate and accurate choices, plans and adjustments in their life, is an indication of teacher's effectiveness. Once the teacher gains the respect and trust of students, his (teacher's) effectiveness is fairly ensured.

(*c*) *Qualifications of teachers* · (*i*) A teacher must possess the minimum of the required *general* qualifications. He should at least be a graduate for all levels of school teaching. However, the researchers have yet to establish the relationship between academic attainments and teacher effectiveness. But, obviously, a teacher who teaches, should be reasonably expected to have a good academic record to set an example for his students. He must be the custodian of general knowledge relating to various disciplines. He should be able to answer the diversified queries of students. This should not be taken as if we want a teacher to be jack of all trades but master of none The main idea behind this thinking is that a teacher should be in touch with the current affairs concerning our life. This will broaden his outlook, add to his perspective and aid in interdisciplinary approach to teaching.

(*ii*) In this age of specialization and intensive studies in all spheres of life, it is very essential that the teacher must claim his *specialization* at least in one of the school teaching subjects. He should be the master of one or two subjects of teaching. This will make his personality all the more influential and impressive. Dalen *et al.* (1960 : 82) remark like this :

> During a teaching career, you will have to stay so mentally alive and engaged in so much steady intellectual activity that a distaste or a lack of genuine interest in scholarship will present an insurmountable obstacle to reaching professional maturity.

The teacher must feel intrinsically interested in keeping himself abreast of the latest advances in his area of specialization. He should remain constantly in touch with the growing knowledge and always maintain the claim to be the master of his subject. The widened area of knowledge broadens the teacher's scope of effectiveness over his students.

(*iii*) Besides academic qualifications, both general as well as specific, the teacher must earn his *professional* qualifications before making an entry into the teaching profession. This aspect of qualifications relates to his professional training which is popularly known as teacher training programme. Before embarking on the profession, the professional must internalize the skills of his profession. He should be in the know of different methods of teaching and by virtue of his

practice, should evolve his own efficient and competent style of working. Professional competency and efficiency are directly and very closely linked with the effectiveness of teachers. Furthermore, once taken, professional degrees and qualifications should not lead to complacency in teachers. The active participation of a teacher in the orientation courses, workshops and seminars, is very necessary to keep his professional acumen and skill up to the required mark.

To wind up the examination of qualifications of teachers determining their effectiveness, it may be remarked : Teaching is a service profession. To ignite the interest and intellect of pupils, a teacher must possess well-rounded education, a mastery of subject-matter, an understanding of child development and an insight into the learning process.

(*d*) *Teacher's job satisfaction* · Teacher's satisfaction in his job is so self-explanatory that it hardly needs a detailed discussion to elucidate its significance in the determination of his effectiveness. This relates to his identification with the profession and his willingness to be effective. Teacher's proper placement brings forth or inhibits the display of his acquired personality, behaviour patterns and qualifications It is his involvement in the job which will determine the effectiveness of his efforts. Taking school teaching as a matter of joy and pride, sharpens his teaching skill and refines his performance. The feelings of being unfortunate to be in the teaching profession because of reasonable or unreasonable excuses, is very much likely to jeopardise teacher's potential effectiveness. Teacher's style of enjoying his job may compensate for the lack of required personality traits and qualifications for his effectiveness at his job.

Teaching is not a mechanical process. It is an intricate, exacting, challenging job. Teacher's satisfaction and contentment being found and derived from the profession may be an index of his effectiveness. The total commitment to the teaching profession, and enjoying being fully wedded to it, enhances teacher's effectiveness.

2 *Pupil*

The teacher functions for the development of desirable behaviour patterns amongst the pupils He works on the already acquired attitudes, values, habits and temperaments brought form homes, by the students. That means pupils themselves provide the starting point of teacher's mission. The home of a child, as the primary agency of education, lays the essential foundations of pupil's character and personality. The teacher has to react to this 'entering behaviour' of students to mend, mould and enrich it with the attitudes and values of men of character of the society.

Student's respect and reverence for teachers, likings for the school and studies, stimulate the teachers to do their best. Moreover, teachers' effectiveness further gets momentum when they get the due response from their students Students' inclination, aptitudes and efforts to make a mark in their lives, add to the effectiveness of teachers. Students' success is taken to be the best indicator of teachers' success, i.e. effectiveness.

3. *Curriculum*

Curriculum includes courses of studies as well as the conditions of work in which the teacher has to work. The courses of studies are primarily set up by others than the working teachers in the schools. It may be because of their non-participation in the curriculum decisions, that the teachers have always been found to be very critical of whatsoever the curriculum they are asked to cover. At the same time, it is also very pertinent to

point out that many sacrosanct principles of curriculum construction are hardly adhered to in actual practice.

The physical condition, i.e school building, laboratories, library, sports fields, proper seating arrangements for students and availability of appropriate amounts of funds, go to activate the wheels of teacher effectiveness. The physical provisions are needed to provide the infrastructure for the working teachers. These are the facilities required to be provided to the teachers to make the best of their knowledge and skills.

Thirdly, the school organization in its own way, influences the effectiveness of teachers. The nature of leadership (democratic or dictatorial) rendered by the head of the school can prove to be a pace-setter of deterrent to the teachers' willingness to work and show the expected results. Not only this, but the relationship of the society and the school thereby with teachers also accounts for the quality of teacher's work. The respect enjoyed by teachers as persons for their being in the teaching profession, can't be isolated in the discussion of their effectiveness. The pay scales, opportunities for professional and academic advancement along with a ladder of promotional avenues, have to be considered as determinants of teacher's effectiveness.

Evaluation of Teacher's Effectiveness

Teacher's effectiveness is decidedly governed by a number of factors. It is a multi-dimensional concept. The child gets his education both through formal and non-formal agencies of education. The impact of these two agencies can't be studied in water-tight compartments. The effectiveness of the school has to be perceived in conjunction with the influences of home and society in the all-round development of the child. And in the school, each child is influenced by number of students and teachers. It seems quite impossible to isolate an individual teacher's impact on the students for the evaluation of his effectiveness In the encyclopaedias of educational research, Harris (1960 : 1481-88) and Robert *et al.* (1969 : 1423-34) have analytically surveyed the teacher's effectiveness. Gage (1963) furnishes us the basic references on the various issues associated with the evaluation of teacher effectiveness. Briefly stated, three types of criteria have been classified for judging teacher effectiveness. In product criteria, 'ultimacy' and 'proximity' of goals of education have been spelt out. As a matter of convenience, there is a development of the notion of 'micro-effectiveness' rather than sticking to the criteria for judging over-all effectiveness of teachers. Seven categories of criteria of teacher effectiveness have been used in the Wisconsin studies. In the presage studies, teacher's qualifications, experience and personality have been studied in an attempt to predict his effectiveness. These criteria have been used to arrive at the norms for the selection of teacher-trainees in the colleges of education. In the process criteria, teacher has been observed while in the class at work. His method of teaching and students' responses have been analysed to judge teacher's effectiveness.

To locate teacher's contribution in the making of children as desired learners, workers, persons and citizens for the assessment of his effectiveness, still continues to baffle the educationists. A wide range of differences amongst the researchers and practising teachers plague the concept of teacher effectiveness: Biddle and Ellend (1964: 7) have evolved a seven-variable model of teacher effectiveness. This model includes independent variables (teacher behaviour) and dependent variables (teacher effects). Morse and Wingo (1970 : 12) have presented a comparatively simple model. But both these models hardly provide the guide-

lines for the evaluation of teacher's effectiveness. In the words of Withall and Lewis in Gage (1963 : 709) :

> The identification or construction of satisfactory criteria of teacher effectiveness has been a persistent problem, but it is, of course, primarily a question of values rather than one to be resolved by empirical research. In any event, supervisor's ratings, students' opinions, and psychometric assessment all have, in their own way, shortcomings as serious as those of achievement tests in the evaluation of teaching.'

n the evaluation of individual teacher's ffectiveness, it seems as if we are seized with he problem of establishing an input-output quation in the domain of pedagogy. Teacher's working with his person, pupil and urriculum as an input and students' growth, tudent's gains or changes in behaviour as an utput can hardly be numerically analysed. Iowever, this may not deter us to make ystematic efforts to evaluate a teacher's ffectiveness. And for this, we have to cherish realistic attitude towards this. Let us ensure he input and take the output as granted as ar as the evaluation of an individual eacher's effectiveness is concerned. The threeier interaction model of teacher effectiveness as discussed in this paper helps us to arrive at practicable design in this direction.

Teacher effectiveness involves the interaction of teacher, pupil and curriculum. Elements associated with pupil and urriculum are contributing or deterrent ones o the teacher effectiveness. These elements place teacher's efficiency and competency in a esting situation. While working with and nlisting the positive cooperation of pupil and urriculum, the teacher is expected to rise to the demands of his professional commitments and obligations. That is to say, the influences of pupil and curriculum reflect themselves in the person of the teacher in the style of his functioning. And the person of the teacher may be studied for the assessment of his effectiveness for the following factors:

1. *Personality:* This may be got rated for the fine traits of a desirable effective personality from his colleagues and head of the institution The fine traits like man of character, honest, thorough gentleman, noble, man of values and an ideal person, etc. may be included in the rating scale.

2. *Behaviour:* This may be checked by the students on a comprehensive check-list. Student's assessment of teachers' day-to-day behaviour with them both inside and outside the classroom situations, should include his methods of teaching, impartiality, loving and affectionate treatment, etc.

3. *Relationship with school community:* Teacher's relationships with students, with his colleagues and head of the institution, should be studied with the help of sociometric tests.

4. *Qualification:* Teacher's academic, professional and specialized qualifications may be brought under arbitrary weightages.

5. *Job satisfaction:* Teacher's placement at his job may be inferred from his job satisfaction which may be assessed on a job-satisfaction scale.

The pooled up scores on these five areas may give us not only a fair judgement of an individual teacher's expected effectiveness but a comparative study of teacher's effectiveness can also be made. This proposed research design also envisages to locate the factors coming in the way of teacher's manifesting his potential effectiveness.

Practical Implications

The effectiveness of education essentially depends upon the effectiveness of its teachers. In this context, the perusal of this paper

brings forth two important practical implications:

Firstly, to usher in an era of effective education, working teacher's effectiveness needs to be geared up. Its momentum is to be maintained. To achieve this pertinent end, teachers' effectiveness must be brought under effective observations. Factors adversely affecting the effectiveness of teachers are required to be adequately and appropriately dealt with.

The professional institutions should evolve and introduce an effective in-service programme for the benefit of practising teachers. This process should result in preserving and promoting teacher effectiveness. The teachers should remain reminded of their onerous responsibilities. Their self-introspection should serve them well to keep up their effectiveness.

The society should sincerely and honestly give a well deserving respectful and dignified status to the school teachers. Conditions are to be created where people poised with zeal and zest should feel like working as teachers with a sense of pride and feelings of all the pleasure. This scheme of things should lead teachers develop a sound mental health to make themselves as effective as possible in their willingly accepted task of educating the children in the real sense of the word.

Secondly, the dictum of 'well begun is half done', should be adhered to in its right spirit in teacher education programme. This is to establish strong check-posts to make a close scrutiny of the new incumbents to the teaching profession. All and sundry should not be allowed an admission to the teaching profession at its very entry point. Only those young men and women of character who show an ample promise to make themselves effective teachers, should be embraced by the teacher-training institutions. This calls upon us to launch a movement in the quest of best uality qteachers at the right earnest.

These days, we are in a position to select the best and leave the rest from a good number of applicants coming forward to seek admission in the professional schools and colleges of teachers It will decidedly be more dividend fetching venture if along with attending to contents, we should also afford paying a little bit of attention to develop a sound recruitment procedure for the teacher-trainees. We have to implement a determined strategy with conviction that these are only the persons of commitment and dedication, character and calibre who should find their way to the teachers' training courses. They will prove to be dependable enough to introduce any effectiveness worth the name in our system of education. In teachers' training institutions, it is only on these selected people that we should concentrate ourselves to bring an immediate end to the waatage of valuable resources spent on unwanted and unwilling people in the teaching profession.

Gupta (1971) has made a salient set of recommendations for the selection of pupil-teachers. Arora (1978) has made a study on the differences between effective and ineffective teachers. Anand (1981) has made job satisfaction as the criterion to adjudge the quality teachers. He has arrived at the conclusion that these are the candidates of social and aesthetic values along with a high degree of extraversion who should be encouraged to come within the fold of teaching profession People who dominate in economic, political values and a high degree of neuroticism in their personality structure should be screened out at the time of their admission, Along with these personality components, the attitudes of young men of knowledge, and character towards the teaching profession, towards children and their forces of motivation to seek admission to the professional institutions, must be very rationally examined.

This discussion may be summarized as:

1. We should reasonably look towards teacher training institutions for the emergence of prospective effective teachers from their pre-service teacher training programmes.

2. To achieve the ends of school education, the effective teachers should be provided with necessary facilities and opportunities to exercise their effectiveness effectively in an atmosphere which should spontaneously be characterized by themselves as stimulating, challenging and all the more rewarding one.

3. The effectiveness of teachers should be periodically reoriented through regularly scheduled in-service orientation courses in the teachers' professional institutions. This will go a long way to introduce an element of continuity which is found to be quite unfortunately missing in the professional training and education of teachers.

Conclusion

The child's overall make-up is credited to many forces His personality is considered to be the net product of inherent potentialities interacting with a variety of environments. A spectrum of non-formal agencies of education leave their impressions on the receptive minds of school-going children. The prevailing culture of the society impresses upon them to incorporate a certain style of life in their behavioural pattern. That means teachers' role in the character formation of children is to be appreciated within the purview of all these factors. Working under multifarious and incoherent forces, teachers' efficiency and competency (effectiveness) is always under challenge and scrutiny. For the effectiveness of the process of education in general and teachers' effectiveness, in particular, home, school and society, must cooperate and coordinate with each other to reinforce their efforts harmoniously.

Teacher's effectiveness, i.e. his contribution in making the children as physically, mentally, socially and emotionally healthy characters, must be studied under the restrictions and limitations imposed on his person by the 'pupil' and 'curriculum'. But there is no denying the fact that for all practical purposes, teacher's eventual effectiveness is closely knit with his effective personality and capability to develop a congenial environment for his successful working by his resourcefulness, creative thinking and love for the children in abundance

Teacher effectiveness realizes the aims and objectives of education, brings dignity and decency to the teaching profession besides giving a fair deal to the effective teachers to satisfy their ultimate need of 'self-realization' in life.

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Problem Levels and Personality Patterns

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PRESSURES, like frustration, may emanate from inner or outer sources. Inner sources centre round our aspirations and ego ideals and external ones arise from environmental demands like family, social and cultural pressures, etc. Constant experiencing of problems may adversely affect students' psychological make-up. One of the basic assumptions of Freud is that powerful external forces can penetrate the deepest layers of human personality Thus problems ultimately affect behaviour. It is a psychological truism that those who face many problems in their lives would get anxious and frustrated. When they are frustrated they find themselves unable to solve their problems because persisting problems may have the tendency to internalize. With the result, objective or external problems become subjective or internal, and internal conflicts again magnify the external or objective difficulties and, thus, vicious circle sets in to aggravate the situation. Hence it indicates that there may be a significant relationship between the personality of an individual and the amount and intensity of problems experienced by him.

Very little data is available about the problem of study. Most of the investigations carried out so far are surveys to enlist students' problems at different stages of education (Heath and Gregory 1949, Shrimali 1951, Blain and McArthur 1961, AIEVGA 1962, NCERT 1964 Rao 1965, Badami 1967, Delbert 1973, Kanewala 1973 and Horenstein 1976). Some attempt has also been made to relate one or two personality factors or traits with problems (Goldman 1968, Bhalla 1970, Wagonseller 1972, Suddha and Lalitha 1979). This study, on the other hand, investigates into the problems of the professional students in relation to their personality. An attempt has been made to study personality patterns of students in the professional courses of engineering, law, medical and teaching at different levels of problems.

This paper reports some findings on these aspects. The results presented in this paper are based on data collected from both boy

and girls preparing for the first professional degree, i.e. Bachelor in Medicine (M.B.B.S), Bachelor in Law (LL B), Bachelor in Engineering (B.E.) and Bachelor in Education (B.Ed.) who were studying in Aligarh Muslim University (AMU) and in all the three colleges in Aligarh affiliated to Agra University.

Design of the Study

Under the broad canvas of personality only four personality factors, i.e. personality adjustment, self-concept, level of aspiration and creative potential have been included to study the personality patterns The problems have been categorized under ten areas which almost covered all the aspects of students' activities.

The standardized tests were used to collect the data. A students' problem checklist standardized by the Educational and Vocational Guidance Centre, AMU was used to collect problems of the students. Different personality factors were measured through different personality tests such as Jamil Qadri's personality adjustment inventory, Ansari and Ansari LA coding test for level of aspiration, GA Ansari SA scale for self-concept and Sajida Zaidi's ideational tendency scale for creative potential.

The personality factors were compared among different professional groups by comparing their means and testing their significance of difference through 't' test at .05 level of confidence. High and low problem groups were located in each professional group by including all the cases obtaining scores one SD above the means in the high group and one SD below the mean in the low group. Different personality patterns were compared at different problem levels.

Findings

Tables 1 and 2 present the results obtained regarding personality patterns of personality adjustment, self-concept, level of aspiration and creative potential of the students in engineering, law, medical and teaching professions. Medical students were found to be by far the best adjusted students out of the four professional groups. But other groups did not differ significantly among themselves.

TABLE 1

MEAN VALUES OF PERSONALITY VARIABLES OF DIFFERENT PROFESSIONAL GROUPS

Personality Variables	GROUPS			
	Engineering	*Law*	*Medical*	*Teaching*
Personality adjustment	22.74	23.50	19.86	22.7
Self-concept	20.28	20.43	22.27	22.8
Level of aspiration	5 28	4.54	3.37	3.74
Creative potential	95.99	77.79	132.10	93.19

TABLE 2

RATIOS OF PERSONALITY VARIABLES OF DIFFERENT PROFESSIONAL GROUPS

Variables	GROUPS					
	EL	*EM*	*ET*	*LM*	*LT*	*MT*
Personality adjustment	0.62	2.63**	0 04	3.14**	0.64	2.95**
Self-concept	0.16	3 04**	3.16**	2.53*	2.52*	0 33
Level of aspiration	1.07	3 15**	2.72**	1.69	1.22	0.67
Creative potential	7.42**	12 05**	1.23	18.16**	6.79**	13.67**

*Significant beyond 05 level

**Significant beyond .01 level

On SA both medical and teaching groups were significantly lower in self-concept than engineering and law groups. Engineering students obtained significantly higher GD scores than medical and teaching students. Thus they were found to be higher in level of aspiration. But engineering and law groups did not differ between themselves. The results obtained with regard to creative potential manifest that medical group excelled all the other three groups and law lagged behind. Both engineering and teaching groups did not differ from each other having almost same level of creative potential.

In order to compare the personality patterns of the four professional groups at different problem levels students in each profession were divided into high and low problem groups and their mean scores on each personality variable were compared. On personality adjustment low problem groups of engineering, law, medical and teaching were significantly more adjusted than their corresponding high problem groups. But problem levels did not seem to produce any change in self-concept and level of aspiration of the students of all the four professions.

TABLE 3

SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF HP AND LP GROUPS ON PERSONALITY ADJUSTMENT

Groups	*High Problem*		*Low Problem*		*df*	*t*
	N	*M*	*N*	*M*		
Engineering	22	33 36	17	11.59	37	5.81*
Law	36	30 61	g	9.33	43	9.81*
Medical	10	33.00	42	12.07	50	8.62*
Teaching	53	34.64	47	13 77	98	12.75*

*Significant beyond .01 level

TABLE 4

SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF SELF-CONCEPT OF HP AND LP GROUPS

Groups	High Problem		Low Problem		df	t
	N	M	N	M		
Engineering	22	20 64	17	18 76	37	0.83
Law	36	21.72	9	18 67	43	1 01
Medical	10	25 50	42	22.83	50	0 64
Teaching	53	23.70	47	22 74	98	0 63

TABLE 5

SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF HP AND LP GROUPS ON LEVEL OF ASPIRATION

Groups	High Problem		Low Problem		df	t
	N	M	N	M		
Engineering	22	5 18	17	3.47	37	0.79
Law	36	5 75	9	6.44	43	0 36
Medical	10	1.50	42	3.07	50	0 47
Teaching	53	5.11	47	2 96	98	1 55

TABLE 6

SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF HP AND LP GROUPS ON CREATIVE POTENTIAL

Groups	High Problem		Low Problem		df	t
	N	M	N	M		
Engineering	22	98.53	17	88.62	37	1.13
Law	36	77.83	9	76.72	43	0.13
Medical	10	128.50	42	131.40	50	0.28
Teaching	53	89.41	47	94.50	98	1.05

The means of creative potential scores of high problem groups of both engineering and law were more than low problem groups which means higher the problems greater the creative potential. But medical and teaching groups manifested opposite tendency. It indicates that lower the problems higher the creative potentiality. But all the high problem groups profession-wise did not differ significantly from low problem groups on creative potentiality. Hence problem levels did not produce any significant change in creative potentiality of the students though otherwise change was observed. On comparing personality patterns of high and low problem groups a wide gap between personality adjustment of high and low problem groups of engineering students is observed. But it narrows down at creative point The problem levels further come closer to each other and almost converge at the two points of self-concept and level of aspiration which indicates similarity in their patterns.

Again a wide gap between adjustment levels of high and low problem groups of law students emerges which narrows down sharply on self-concept. It comes further closer at level of aspiration and creativity points. Thus, only negligible difference is observed between the two levels.

Quite discernible similarity is noticed in personality patterns of medical and law groups regarding all the four personality variables But their mean values sharply differed. High problem group of teaching appears to be less adjusted than its corresponding low group Thus, a wide gap is observed at this point. Very slight difference is found in self-concept but the gap is slightly increased at level of aspiration, thus, both the levels slightly diverge from each other at these points. They further diverge at creative potential leaving a wider gap between the two levels.

Discussion

The results by and large highlight the fact that different professional groups can be differentiated from one another on different personality variables. Medical group was found to be best adjusted, least self-accepting (least satisfied with regard to their self-achievement), least aspiring (most cautious and realistic in future goal of achievement) having the highest creative potential. Law group, on the other hand, was found to be least adjusted, highest on self-concept, high aspiring and least creative. Both engineering and teaching occupied the middle position except in the level of aspiration. Engineering students were highest in aspiration. They were, thus, most ambitious in goal-setting behaviour and hence least realistic.

Another dimension of the work was to study personality patterns at different problem levels. In all the professional groups low problem students were better in personality adjustment than high problem students. Thus it indicates that lower the problems higher the personality adjustment and vice versa. The students of all the professional groups did not accept themselves differently at different problem levels. Thus, self-concept did not appear to be influenced by prob ems. Similarly professional groups did not differ significantly on level of aspiration at problem levels. Thus their aspirational levels do not vary at different problem heights. In creative potentiality again no significant difference is found profession-wise but, on the whole, low problem group was found having more creative potentiality than high problem group It means that lesser the problems higher the expression of creative potentiality or vice versa In the case of engineering and to some extent in law groups opposite trend was observed The students of high problem groups were more creative

than their low groups. Thus, problems, in some cases, stimulate creative impulse whereas in others act as a stumbling block in creative expressions

Different patterns emerged when personality factors of different professional groups at problem levels were compared. But certain similarities between personality patterns of some groups were also observed. A wide gap between personality adjustment between high and low problem groups was observed in all professional groups. Low problem groups invariably were found to be better adjusted. Thus lower the problems better the adjustment and vice versa.

On self-concept and level of aspiration gap between the two levels of problems was negligible in all the professional groups. But again gap between the two levels was observed on creative potential though they came closer appreciably in comparison to personality adjustment. High problem groups of engineering and law students were found to be higher on creative potentiality whereas in medical and teaching groups high problem groups were low in creative potentiality.

Conclusions

1. Dissimilarities were found in personality patterns of some of the professional groups. Medical and law students differed entirely from each other. Medical students were found to be the highest on personality adjustment, creative potential and the lowest on self-concept and level of aspiration. On the other hand, law students were found to be the highest on self-concept and level of aspiration but the lowest on personality adjustment and creative potential

2. Certain similarities in personality patterns were also observed in some groups. Engineering and teaching groups exhibited striking similarities in some of the personality variables. Both engineering and teaching groups, while occupying middle position in personality attributes, did not significantly differ from each other except in self-concept and level of aspiration where engineering group was found to be higher in self-concept and level of aspiration than teaching group.

3 The students preparing for the four professions manifested some distinguishing characteristics Engineering students, in general, were found to be the adults of normal adjustment with greater number of high self-accepting (high self-concept) and high aspiring students having sufficient creative potentiality. Law students, as a group, were found to be satisfactorily adjusted with greater number of high self-accepting and high aspiring students but possessed least creative potential Whereas medical students were found to be the adults of well-adjusted personality but were least self-accepting and least aspiring with highest creative potential. Teaching students were at par with engineering students in personality adjustment and creative potential They were moderately high in level of aspiration but were least self-accepting like medical students.

4 High problem students in general, were found to have lower personality adjustment, lower self-concept, higher level of aspiration and lower creative potential than low problem students.

5. High problem students, profession-wise, were found to be lower on personality than the low problem students But problem levels did not produce any change in self concept and level of aspiration of all the professional groups. The high problem group of engineering were found to be higher on creative potentiality than low problem group. In law high problem group was slightly higher in creativity On the other hand, high problem groups of medical and teaching possessed lesser creative potential than their corresponding low groups.

Towards Improving Education for the Rural Youth

The Working of Two Universities in India and America

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INDIA and America, two of the great democracies of the world, are often recognized for their different and unique characteristics. Differences may include manner of dress, cultural heritage, customs, life style, religious preferences, geography and so forth Similarities exist also For instance, what relationship does an island village of the coast of Maine, a small community in Stony Creek, Alaska, near the Arctic circle, a farming community in Nebraska or a mining town in the southern part of Arizona have in common with Sri Ganganagar of Rajasthan, Uchhal of Gujarat, in India? Probably not much, all things being considered, but in one characteristic they are the same. These groupings of living dwellings are classified as rural areas of the United States and India.

Diversity is a characteristic of rural living not only in America and India but also among the states and regions and local communities within each country. In America substantial differences exist among rural communities with regard to economic base, socio-economic characteristics, community values, ethnic and religious composition and population density. The same is true for Indian villages. Despite the differences one idea is held in common and is an important characteristic of each rural area. To rural Americans schooling is a vital segment of each young person's training and is seen as a means to improve the status and manner of living of all citizens whereas people of Indian villages have not been so conscious about the same though schooling facilities are available in almost all the villages in India.

The value of rural schools is reflected in the number of students who attend them. In 1975, in America, there were more than 15

million children (5 through 17) enrolled in non-metropolitan schools. This number included 13.6 million white children, 1.8 million black, Indian, Spanish American and other minority group children. These figures represent approximately 32 per cent of all school-age children enrolled in public schools during that period. Effort and interest, however, do not necessarily indicate quality. Urban America enjoys a far better standard of living than those individuals found residing in rural sections of the country. This situation is all the more true for India. There remains a disproportionately high number of low-income rural citizens whose access to adequate housing, transportation, health services and other critical resources is not readily available.

What was once considered to be "the best way of life in America" has become as "the most disadvantaged" or more simply "the people left behind". Similar feelings could be observed in India too. Obviously, this somewhat negative view is not a condition of all rural areas in America. Many rural communities have a good income base, adequate services and good schools. However, rural areas, both in America and India, typically have poorer housing standards, fewer cultural attractions, less opportunity for adequate medical care, less opportunity to attract federal and state funding for programmes and the lowest levels of education as compared to urban areas of their respective country.

Rural schools in America have historically shared several common problems. Young people growing up in rural communities have less than one chance in four of finding gainful employment in the local area upon reaching the adulthood. While this problem is more true in India. Farming occupations which have been on the decline for decades no longer offer ample employment opportunities. Thus young adults are forced to migrate to cities in order to find work. As a result the samll community loses talented individuals and the person moving must attempt to adjust to a vastly different environment than he/she may have been raised in.

If the problems of lack of economic wealth were minimized other problems just as troublesome persist in providing adequate education for rural youth. The population sparsity of rural areas and often the complete isolation from city goods and services provide almost insurmountable difficulties for rural educators. These two factors result in many related difficulties for the schools. The more isolated the school the more persistent will be problems of (*i*) keeping children motivated and desirous of continuing school (*ii*) recruiting competent teachers, (*iii*) providing quality and consistent inservice training programmes for teachers, and (*iv*) enriching the curriculum to provide all the subject offerings necessary to ensure an adequate educational base for students. To overcome these and other school difficulties an increasing number of U S. universities are seeking ways of rectifying the inequalities that exist between rural and urban education programmes. Indian universities have still not directed serious attempts in this direction. This paper provides a brief overview of the extent of rural education in the United States and then identifies some of the ways in which Bringham Young University in Provo, Utah has attempted to improve the quality of teaching in rural schools. Suggestions have also been made how two universities in the U.S A. and India could collaborate so that these experiences could be utilized in India.

Rural Education in America

Typically when one thinks of another

country they do so in terms of the major attractions (mountains, rivers, farm, land, etc.) and the primary cities. Thus, in America tourists think of New York, the Grand Canyon and Disney Land in Los Angeles ; in England, London ; in France, the city of Paris, and in India, the cities of Bombay, Calcutta, Delhi, Agra, Jaipur, Himalayas, big temples of South India and the river Ganges Little thought is given to the number of people who live in the vast rural areas of most countries. It is difficult to adequately define just what constitutes a rural or non-metropolitan area. By and large, the rural community and rural area derive their designation by a small population, isolation and a lack of needed services for maintaining an adequate standard of living when compared with urban opportunities

Population density and geographical location affect markedly the size of school and curricular offerings One student at Brigham Young University who received his training in the rural programme as discussed later in the article) took a job at Stony Creek, Alaska, as a secondary teacher. No roads go to Stony Creek. The only way in is by plane. The nearest store is 120 miles away and the nearest doctor is 160 miles His first home was a one-room trapper's cabin. The refrigerator was a box placed outside the back-door. Cooking was accomplished on a small camper stove, The population was total Aleut Indians who lived on a small island surrounded by one of the larger Alaskan rivers. The school was held in a metal quonset hut. Two teachers served the students. The Bringham Young University student taught grades 9, 10, 11 and 12 to sixteen secondary students. Obviously this situation would be an extreme of rural living and teaching. In India one can find ample examples of even poorer and disadvantaged villages.

Now the question arises, why do rural areas find themselves behind their metropolitan counterparts in terms of wage levels, family income, adequacy of housing and access to essential public services such as health care and education ? Primarily the problem stems from the employment base found in the rural setting. The lack of employment opportunities is evident in rural areas. Labour-reducing technological improvements have reduced the need for workers on the farms Farms have also increased in size and many of the samll average farmers have sold their farms. Business firms of any size typically do not locate in the non-metropolitan area. They wish to locate where labour is plentiful and the raw goods necessary for their operation are available. As young people reach employment age in a rural area they find little demand for their labour. Those who are able leave to find work in the cities causing rural areas to lack leadership

The high rural outmigration depletes the population. Those that remain are often unskilled, can only find employment in low paid jobs and do not have the incentive to improve their individual income or standard of living. The lack of adequate taxable resources in these areas creates difficulties for the schools as they seek to provide a quality education for the students. School services must be reduced when the tax support/community support for education is limited.

Of necessity, the various states in America have had to lend financial support to local rural school districts to assist them with maintaining an adequate education offering But these are often not enough. It may not be feasible or even reasonable in a small school of only 120 students and four teachers to hire a librarian, guidance counsellor, nurse and reading specialist or to hold preschool classes, career guidance programmes and provide special education programmes for the few handicapped and slow-learners.

Likewise, even if funding were available many trained personnel would rather teach and work near or in the metropolitan area where living standards are higher and social services are more readily available The cost per student in the small school is substantially above that of the larger urban schools. In some instances, the student cost in small schools may be twice that of larger schools because the student numbers are fewer

The Rural Teacher

A major weakness of rural schools has been the inability to hire and retain quality teachers and administrators All too often these school personnel see the small school as a temporary step to a later move to a larger school district This kind of temporary commitment on the part of school employees leads to a poor moral among the staff, lack of programme continuity and a pattern of unrest with students. In some situations a school has had a new teacher to teach a particular subject every year for four or five years in succession. The teacher turn-over rate among rural schools is substantial and necessitates a constant effort to keep the classrooms fully staffed.

Among the major problems encountered by the teacher in the rural schools are heavy course loads and numerous after-school assignments. It is very common to find rural secondary teachers teaching as many as five or six different daily preparations. Competitive sports have become an integral, if not excessive, part of a student's daily activities. Girls now participate in as many sports as the boys. In addition, the future farmers of America and future home-makers of America will have substantial club programmes in most rural schools. All of these activities will require coaches and sponsors that are selected from the teaching staff and, who usually work after school hours. In the large high schools with over 20 teachers it is much easier to offer more subjects to students and to assign teachers only one or two different subjects to teach The after-school assignments are also evenly distributed among more teachers lightening the extra-work duties.

Adequate inservice education for rural teachers is difficult An urban teacher may attend a seminar in reading, mathematics, business, etc at a nearby university which is not so easy for the rural teacher. Urban teachers can also more easily work on and secure advanced degrees while the rural teacher must generally move to an urban area in a university location to take advanced courses. This latter arrangement is costly and takes considerable effort on the part of the teacher to remain current academically.

The rural teacher is well trained It is now uncommon to find a school district employing teachers who have not completed a four-year college programme leading to a bachelor's degree in America. Also, in India only trained teachers are employed in schools. Teachers in rural schools do have class sizes that are smaller than those teachers working in the larger cities. The teacher in a rural community must be prepared to work in circumstances that often do not assist them to produce the best results with the pupils. Many rural children ride buses for substantial distances to and from school thus making their day a tiring one. Rural students still continue to attend schools with fewer support staff and services, less revenues and less per pupil funding In addition, more rural students are likely to enrol in school later, progress through school more slowly, complete fewer school years and score lower in national tests than their counterparts attending metropolitan area schools These observations are true for both the countires : America

and India. Even in the best of circumstances all of the needs of rural education could not be met due to the diversity of rural areas and the factors of isolation and low population density. However, much can be done by teacher training institutions to improve the support offered to rural schools.

The University and Rural Education

In America prior to 1940 and in the event of World War II, a number of teacher preparation institutions offered programmes for training teachers to work specifically in small school settings The war necessitated the consolidation of training efforts as money was limited and teachers were needed desperately to fill unmanned classrooms where the armed services had recruited heavily. Teacher training beeame a single programme and rural preparation was dropped. After the war the returning soldiers remained in the cities creating a large population growth and the need for teachers trained in urban and 'inner-city' schools.

A number of universities are beginning to realize that urban teaching specialization is not adequate for rural teaching but changes are slow in coming Training for those who want to teach in rural schools is practically non-existent In fact, very few schools of education encourage future teachers, in any systematic fashion, to seek rural school positions after graduation The reasons for this apparent lack of concern can be tied, logically, to low salaries offered to rural teachers, isolated community living, and the ease with which future teachers can be placed in nearby urban schools to serve their internships as student-teachers.

The best rural teachers are the ones who are committed to community and rural life, who can adapt to unique situations and who prefer much personal contact with young people of school age. In America of the approximately 790,000 teachers in the public rural schools one out of every three is found in a rural classroom It is very critical that in a small school of only a few faculty members that the teachers understand the needs of citizens in rural communities who will understand accept the requirements that will be placed upon them in the classroom. In India, where 80 per cent of the population live in village, no attempt has been made to prepare teachers for rural schools Practically nothing has been done to develop models of rural schools to cater to the needs of rural areas

The Bringham Young University Rural Programme

The College of Education at Bringham Young University is committed to helping small school districts improve their educational programmes by improving the quality of teaching. To reach this goal the following programmes have been conducted.

Rural teacher training : A limited number of students are encouraged to teach (field-based teaching experience under the guidance of a college supervisor and on site cooperating teacher) in a rural area at least fifty miles from the college campus. (Bringham Young University enrolls some 26,000 students.) The students may be assigned to teach in a rural school from four to sixteen weeks depending upon the ability of the student and his desire to teach in a rural setting Some time is usually spent in practice teaching in an urban school also. The students live in homes of people in the school district or they may rent a small apartment. Studies have indicated that future teachers who complete their practice teaching in a rural school will most likely want to teach in that area. In the past eight years over 400 student-teachers have gained valuable rural teaching experience.

Rural teacher exchanges: Bringham Young University was the first university to try this type of programme in the nation and the results have been very rewarding. A number of other schools are now involved with teacher exchanges and report good results. A rural school district contacts the director of rural education at the college. An agreement is made for the school or schools to remove their teachers from the classrooms for a specified number of school days (usually from three to five) while the college replaces every classroom teacher with a student in the teacher training programme. The college students teach the classes on a regular scheduled basis and are supervised by their college instructors. The student-teachers live in the homes of teachers or other community residents during the experience. Most often the regular teachers will attend an inservice workshop during the days that they are out of the classroom. The college usually conducts the workshop which is based upon the needs of the teachers in that district. At the present time over twelve school districts have been involved in this programme and more are becoming involved each year. When the college students teach in the rural schools they become more aware of the advantages of rural living and the benefits that can be derived from teaching in a small school. Many of these people will decide to teach in a rural setting upon graduation.

Rural graduate programme: The college offers the master's and doctorate degrees to selected groups of teachers and/or administrators in rural areas who want to work on advanced degrees in counselling, educational psychology, adult community education, school administration, or elementary and secondary education. The degrees are practical based and the effort is to meet the educator at his work as much as possible. On campus course work is involved only during the summer months. During the school year the professor visits the group of students (they must be working at some school position) in the area for monthly seminars and to assist them in professional education projects Doctoral students also complete a doctoral dissertation which relates to their area of work. This programme is accredited and is nationally recognized as an outstanding graduate programme in education. One value to educators is that they don't have to give up their job to come to school to receive an advanced degree.

Rural mini-teaching programme: Some of the academic departments on campus (home economics, science, music, social studies) want their students to experience rural teaching as they begin the professional teacher training programme. These students prepare special presentations in their subject field that will be of interest to students in elementary through high school. The college teachers contact the schools and a schedule is made of presentations and what school periods will be involved. On appointed days the students arrive and teach their topics to the periods scheduled. Some presentations have included outdoor cooking, making hand puppets, singing, keeping clean, fixing your hair, making decorations, enjoying history, etc. Often the college students spend the night sleeping in the school because they are too far from the college to return home in one day. The local teachers will usually take the college students on a tour of the area which is educationally rewarding to all.

The university believes that the best teacher-training programme provides opportunities for future teachers to experience the values and rewards of both urban and rural teaching. Then these teachers can decide in which kind of school and community they, both professionally and personally, are better suited to direct their careers.

The authors believe, since the programme for preparing teachers for rural schools is practically non-existent in India, collaboration among a few Indian universities with Bringham Young University could be feasible in developing some viable training programme for rural teachers. One Indian university (for example South Gujarat University) could be a base of such collaboration and other sister universities could be project universities at the first stage. Later each participating university could develop and implement their programmes independently. In the first phase somesummer institutes for rural school teachers/teacher-educators could be organized and then pragiammes in rural education could be initiated at different universities. Besides this, during the first phase of collaboration research projects in rural education to provide necessary data for development of rural education programmes, teaching and training methodologies, curriculum, development of teaching-learning materials and evaluation could be taken up. Attempts could also be made to develop models of the rural school.

□

Family Background and Military Leadership Qualities

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THE maxim that leaders are born, no more enjoys a scientific credibility. Leadership, in fact, demands upon the interplay among the genetic endowment, physical environment and socio-cultural conditions. The qualities a leader possesses or which enable a person to lead, are considerably shaped by the situations, he is born and grows in. The most important among such early forces, an individual passes through, are his home environment and immediate surroundings.

The home and the neighbourly surroundings of a soldier's son are vastly different from those of a civilian's son. The former lives in the cantonments which are still away from 'madding crowds'. These are adequately developed areas with planned houses. There are parks for children and playgrounds for adolescents. Roads are wide and flanked with green trees. Adequate care is taken to keep the surroundings neat and clean. On the contrary, the civil areas are generally congested and overcrowded. The houses except in the new colonies are ill-ventilated and the surroundings do not project a very hygienic environment. Parks and sport-grounds are miles away from the living areas. The roads and lanes are badly encroached upon. In nutshell, the two areas are almost diagonally opposite to each other. Thus, in cantonment areas even a recruit (jawan) who is at the lowest rung of the military hierarchy, is able to provide much better surroundings to his children than a low paid civilian can do. Beside the environment, his own personal life is also different from that of his civilian counterpart. Hygiene is a part of his discipline and runs into his blood viens. His dress is neat and tidy and his health and food are under a constant watch of his superiors. He is granted an optimum standard of living commensurate atleast with his minimum requirements Other facilities like free treatment in neat and clean hospitals, unadulterated household goods from canteens at concessional rates and education for his children in well-staffed central schools,

make his day-to-day life distinctly and favourably different from that of the civilian population of his economic standing. Moreover, his daily routine and turn-out may instil a sense of punctuality and orderliness even in his children. The impact of the adventurous jobs he is engaged in, is likely to percolate down to his children and make them tough and bold.

But these favourable factors apart, his children are subjected to certain disadvantages too First, they are not exposed to a varied and heterogeneous environment This is likely to limit their mental horizon *vis-a-vis* diversified thinking. Secondly, frequent transfers of their fathers force them to change their schools and the peer groups in a quick succession. This tends to hinder their educational achievement due to dissimilar curricula in different states and may even interfere with the psychological processes of identification with the schools and teachers, and internalization of ego-ideal figures. And lastly, absence of fathers from home for long periods due to their postings in the border areas, deprives them of valuable guidance and a sense of security at a time when they need them most

The purpose of this comparison between the military and civil family backgrounds is, however, not to portray the advantages/disadvantages of either but only to highlight the differences and the direction thereof. The present study attempts to see the developmental pattern of military leadership qualities in children brought up in these two different subcultures. A number of studies can be cited to show the relationship between the sociocultural environment and the personality traits Taylor (1948), Spindler (1957), Pearlin and Kolin (1966), Raina (1968) and Kakkar (1974), to quote a few, have discovered a positive close relationship between sociocultural variables like family, school, religion and the personality traits like motivation, adaptability, attitudes, mental health and value systems. In contrast, only a few attempts have been made to study the relationship between military sub-culture and the military leadership qualities (MLQS). A comprehensive survey in this area was conducted by the British Psychology Research Centre which is quoted by Baynes (1972). To quote some of the findings, the sons of those who held commission in the army were more likely to be successful in the competition for commission than those whose fathers did not have commission. Similarly majority of the boys selected by the Selection Board came from reputed Grammar Schools. The present study is one more attempt to see the impact of military sub-culture on certain personality traits.

Design

The most penetrating system to assess the leadership qualities is being followed by the Services Selection Boards (SSBs). This system comprises of three techniques known as the interview, the group testing and the psychological tests. Three different teams of the assessors trained in each of the three techniques test the candidates on a set of leadership qualities which are popularly called OLQ's (officer like qualities) on a ten-point scale starting from point 1 for the highest to point 10 for the poor. As the psychologists use both the intelligence tests and a battery of personality tests, it was decided to confine the study to their assessment alone. Besides, only such qualities were chosen which are comparatively more important and liable to be assessed by psychological tests with greater degree of precision. The same are given in Table 2 onwards.

Sample

There are several entries through which the candidates are selected for officer cadre (commission) in the defence services. However, the main entries are only two, the NDA and the CDSE. The data for the present study was collected from the candidates coming for these two entries at the Selection Centre East, Allahabad The selection was done randomly keeping the size of sample as 130 candidates They were divided into two categories, i.e the candidates coming from military families and those coming from the families of the civilians (Table 1).

TABLE 1

COMPOSITION OF THE SAMPLE

Entry	*Background*		*Total*
	Military	Civil	
NDA	18	40	58
CDSE	32	40	72
Total	50	80	130

Data Collection

All the 130 candidates were assessed by three different psychologists as they came in different batches on different dates. This variability was considered a desirability as it would reduce the subjectivity of a single assessor. Their assessment on only ten qualities in respect of each candidate was collected to see the differences between the candidates coming from two different backgrounds, i.e. military and the civil. An average rating on each of the ten qualities was obtained for each candidate (Table 2). It is noteworthy here that a higher rating score indicates low level of quality and the vice-versa as the rating scale used is in descending order, i.e, score 1 indicates the highest level of a quality while score 10 indicates the lowest level.

Analysis

To know the significance of the mean differences the *t*-test was used and the results, wherever found positive, have been shown accordingly.

TABLE 2

BACKGROUND-WISE AVERAGE RATINGS ON LEADERSHIP QUALITIES

Leadership qualities	*Ratings*	
	Military Background	*Civil Background*
	N-50	N-80
1. Comprehension	7.12	7.35
2. Application	7.44*	7.85*
3. Imagination	7.28	7.63
4. Adaptability	6 08	6.16
5. Sense of responsibility	6.02	6.02
6. Initiative	7.12*	7.45*
7. Self-confidence	7.26	7.56
8. Influencing ability	7.58*	7.90*
9. Determination	6.94*	7.40*
10 Courage	7.02	7 35

*Significant at .05 level

Discussion of Results

A glance at Table 2 reveals that the candidates coming from military home background are superior to their counterparts from the civil home background on 7 out of 10 leadership qualities. There are comprehension, application, imagination, initiative, self-confidence, influencing ability and adaptability. On the sense of responsibility, both

TABLE 3

SOCIO-ECONOMIC STATUS-WISE AVERAGE RATINGS ON THE LEADERSHIP QUALITIES

Leadership Qualities	Ratings			
	Officers' Sons	JCO's and ORs' Sons	Civil candidates' parental income	
			Rs. 1500 p.m and above	Less than Rs 1500
	N-30	N-20	N-25	N-55
1. Comprehension	7.10	7.13	7.16	7.44
2. Application	7.40	7.50	7 72	7.93
3. Imagination	7.25	7.30	7 32*	7.73*
4. Adaptability	6.07	5.95	6.36	6.09
5. Sense of responsibility	6.00	6.05	6.12	5.96
6. Initiative	7.10	7.10	7 44	7.38
7. Self-confidence	7.25	7.30	7.02*	7.62*
8. Influencing ability	7.45	7.67	7.92	7.89
9. Determination	7.10*	7.70*	7.28	7.35
10. Courage	7.10	6.85	7.28	7.38

*Significant at .05 level

TABLE 4

PARENTAL INCOME-WISE RATINGS ON THE LEADERSHIP QUALITIES

Leadership Qualities	Ratings		
	Parental Income		
	Rs. 700 p.m. and below	Rs. 701 to 1499 p.m.	Rs. 1500 p.m. and above
	N 27	N-50	N-53
1. Comprehension	7.63*	7.20	7 10*
2 Application	7.72	7.72	7.60
3. Imagination	7.71*	7 58	6 79*
4. Adaptability	5.77	6.10	6.04
5. Sense of responsibility	6 04	6.04	5.98
6. Initiative	7.41	7.28	7.29
7. Self-confidence	7.63	7.54	7.49
8. Influencing ability	7.81	7 80	7.72
9. Determination	7.15	7.30	7 19
10. Courage	7.29	7.28	7.09

* Significant at .05 level

TABLE 5

PARENTAL EDUCATION WISE RATINGS ON THE LEADERSHIP QUALITIES

Leadership Qualities	*Ratings*		
	Up to Primary School N-15	*From Class VI to XII N-45*	*Above Class XII N-70*
1. Comprehension	7.28	7.49	7.00
2. Application	8.00	7.86	7 41
3. Imagination	8.07*	7.54	7.24*
4. Adaptability	6.27	6.27	6.63
5. Sense of responsibility	6.07	6.14	5.97
6. Initiative	7.30	7 47	7.13
7. Self-confidence	8.07*	7.62	7.14*
8. Influencing ability	7.93	7.91	7.60
9. Determination	7.40	7.44	7.07
10. Courage	7.48	7.48	7.04

*Significant at .05 level

TABLE 6

CANDIDATES' SCHOOL-WISE AVERAGE RATINGS ON THE LEADERSHIP QUALITIES

Leadership Qualities	*Ratings*				
	Public and Convent Schools N-25	*RIMC and Mil. Schools N-10*	*Sainik Schools N-30*	*Central Schools N-20*	*Ordinary Schools N-45*
1. Comprehension	6.80*	6.80	7.07	7.00	7.69*
2. Application	7.44	7.10	7.60	7.35	80.0
3. Imagination	6.88	6.90	7.50	7 40	7.90
4. Adaptability	6.04	6.00	5.90	6.05	6.10
5. Sense of responsibility	6 08	5.90	5.90	5.95	6.09
6. Initiative	7.04	5.90	7.10	7.30	7.57
7. Self-confidence	7.01*	7.10	7.50	7.40	7.90*
8. Influencing ability	7.56	7.20	7.70	7,50	8.00
9. Determination	6.88*	6.20	7.15	7.05	7.57*
10. Courage	6.84	6.40	7.15	7.40	7.40

*Significant at .05 level

the groups are equal while on the rest of the two qualities, determination and courage, the picture is just opposite In other words, on these two qualities, the candidates from the civil background are better than the wards of the military service personnel. However, the mean difference is significant on four qualities only, namely application, initiative, influencing ability and determination. Thus the findings do reveal the influence of the home background on the personality development though the direction and degree of this influence are not the same for each quality.

Table 3 displays the candidates coming from military home background in two different groups depending upon their father's ranks. One group consists of the children of commissioned officers ranging from Major General and the other of JCO's and ORs' children (their number being 30 and 20, respectively). Sons of officers are seen to have secured slightly better rating on seven qualities out of 10 while the sons of JCO's and OR's are better placed on other three qualities. Thus the pattern of the differences between these two groups also is almost the same as it is seen between the candidates of military and civil families (Table 1). But the significant difference exists between these two groups of children (from military background only) on determination only. This large degree of similarity is probably due to the similarity of socio-cultural aspects between the home backgrounds of both the groups as both of them live in almost the same type of social milieu as compared to various segments of civil population. To verify this conclusion, the candidates with civil home background were also divided into two groups on the basis of their parental income. The dividing line was taken Rs 1500 per month to compare with the division of the candidates with military background so far as posssible (since a commissioned officer with the rank of Major the lowest rank present in the sample, draws 'carry home pay' around Rs 1500 while a senior JCO's emoluments plus facilities like free house and ration would come just below the same level). Ratings on the leadership qualities for both these groups of civil backgrounds are given in Table 3. The figures indicate that the pattern of various qualities for both these groups also remains almost the same as it was for the two groups with military background. However, the margin of the inter-group differences among the civilian candidates is relatively greater than what we see among the candidates from military background. Besides, both these groups differ significantly on two qualities, that is, imagination and self-confidence. This shows that the socio-economic factors did influence the development of the leadership qualities but this influence was levelled, to some extent, in case of candidates from military background. This might happen, as stated above, due to the similarity of socio cultural environment prevalent in all the segments of military community. Such environmental similarity is missing in the civil society, hence the greater difference between the two groups of boys from civil background.

How far the socio-economic factors affect the leadership qualities in the whole sample, can be seen from Tables 4 and 5 The whole sample was divided into three groups based upon three income slabs decided arbitrarily. The average ratings for the candidates falling in the three brackets on the ten qualities are shown in Table 4 A glance at these figures reveals that as the income slab grows, the average rating on nine qualities (out of 10) goes down. The scale being in descending order, means that leadership qualities develop better in families having higher income. This

is in line with the findings of numerous investigations in India like those of Shanmugam (1957), Meclelland (1961), Sinha (1969), Pareek (1970) and Gokulnathan and Mehta (1972). The candidates living in comparatively rich homes do not possess as high n-achievement as those coming from poor or low middle income homes; hence the difference between the groups on determination is in reverse order.

Table 5 displays the development of the leadership qualities as per parent's educational status The candidates coming from higher educational background, i.e. graduation, have shown consistently higher leadership qualities than those from the low educational background though the significant difference has been found on imagination and self-confidence only. The only exception is social adaptability where the latter are slightly lower than others. Thus all these findings make it amply clear that it is not merely physical and occupational aspects of military or civil background which influence the development of leadership qualities but the socio-cultural aspects are equally important determinants.

In the formative years of personality development, the children spend most of their time either at home or at school. The effect of home environment has already been discussed above. Now let us see the effect of the school *vis-a-vis* the development of leadership qualities. Depending upon the curricula and the environment, the schools in India can be broadly divided into five categories : (*i*) Public and Convent schools, (*ii*) Military schools including RIMC, (*iii*) Sainik schools. (*iv*) Central schools and (*v*) ordinary schools. Accordingly, the candidates were divided into five groups. Their average ratings on each of the ten leadership qualities are shown in Table 6.

School-wise, the candidates studying in the military schools have shown most of the leadership qualities better than their counterparts from other schools. For instance, they got the highest rating on seven qualities (out of 10) and the next highest on the rest. On the other hand, those coming from the ordinary schools were found consistently low on all the 10 qualities. The rest of the three types of school boys fell between these two groups. The Public/Convent school boys were found significantly superior to all other school boys on comprehension, self-confidence and determination. The Sainik school boys were, however, the lowest on six qualities. It is somewhat surprising here that the Central school boys have shown superiority to the Sainik school boys. It is surprising because the Sainik schools were established with the main aim of producing potential material for the officer cadre of the armed forces but the aim does not appear being achieved adequately.

On the basis of the above, it can be argued that the school environment plays its own role in the development of leadership qualities And its role is probably more than that of the economic conditions of the parents. Had the economic condition been more effective, the children studying in the Public and Convent schools would have shown very high level of leadership qualities since generally the children of higher economic strata only study in these schools.

Conclusion

While summing up the various findings of the study, it can be safely concluded that the military family background plays a favourable role in the development of the military leadership qualities in the adolescents. It compensates to some extent, even for the disadvantages of low socio-economic status in

case of JCOs and ORs. School environment is another equally important variable which tends to minimize the adverse effects of economic disparities on the leadership qualities.

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Nurturing Non-Academic Talent in the School

A Challenge

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IT is essential that every nation should become concerned about all of its potential human resources. It has been observed by manpower specialists that countries may not be able to sustain economic growth unless all the reserves of talents in population are actually sought out and attracted into needed educational channels. The life of the individual in school is of paramount importance. Like hospitals, sports clubs, families, schools exhibit their rituals; they teach their own myths, they trade their own currency, they maintain their own authority structures and their own forms of interpersonal negotiations. However, it is a sorry state of affairs that most schools emphasize academic talent by providing attitudinal, valuational, remuneratory and technical reinforcement and neglect the non-academic talent which is more representative of real-life functioning (Brunswik 1956).

If we are to take our children forward to the future with courage, self-confidence and competence, it is necessary for the school to provide not only good instruction but also create a climate of hard work, diligence and an understanding of the world around them. The school climate provides the framework within which students, teachers, administrators and parents function cooperatively and creatively. From a national survey concerned with the conservation of talent, Holland and Richard (1965) concluded that since they used tests of academic potential exclusively probably they have presented a grossly inaccurate picture of the loss of talent as they have ignored the non-academic talent. Taylor's (1968) findings suggest that nearly all students will have the rewarding experience of being above average in one or another talent area if we cultivate different talents in the classroom. If a variety of talents such as leadership, creative writing, visual performance like art, drama, music, psychomotor acti-

vities like sculpture, mechanics, sports, etc. are tested and trained, for a student can learn a great deal about himself, his ability and consequently become self-directed The psychological importance of non-academic forms of talented accomplishments is that they tell us something about what the student does because he wants to, rather than because of institutional pressures (Friedenberg 1965, Nondstorm, Friedenberg and Gold 1967).

Non-Academic Talent

For our better understanding, we can classify talent such as leadership, creative writing, visual performance and psychomotor activities under major non-academic talent area.

Social leadership : Leadership as a concept can be described from philosophical, ethical, political and historical points of view. For educators, however, the most fruitful explanation is taken from sociological point of view. Leadership is sometimes mistakenly equated with headship, with being chairman of a committee, captain of a team, president of a student council. These represent the formal leadership positions. However, the less formal and tangible aspects of leadership often go unrecognized. So it is wise for a teacher to make a distinction between emergent leadership and appointed leadership. Appointed leadership is closely allied to headship, whereas emergent leadership arises wholly spontaneously from informal groups where leadership roles are distributed among students rather than being centralized in teachers and head.

The academic programme of the schools encourages individual effort and achievement and is probably best designed to produce leaders of the kind in the first phase of leadership cycles and to some extent in the second phase of leadership cycle. The talented as our future leaders, says Passow, will come nearest to the ideal of benefitting mankind only if we present them with the kinds of educational experiences which stimulate democratic attitudes, tolerance, sensitivity to problems of their fellow-men and self-understanding. In extra-curricular activities and athletic programmes of the school, leadership is developed for the third stage and to some degree for the fourth stage. Leadership in the modern world can be more accurately predicted from the participation of a college student in the non-academic organizations in college than from his academic work. There is much that the school can do to promote attitudes and values that will encourage active participation in group life. Some novel approaches called 'management game', 'political gaming', 'role playing' may lead to training in leadership skills. Sense of responsibility, enthusiam, the desire to like and to be liked, the desire to be helpful in a group situation are some attitudes that the teachers can discuss with the pupils. These are an asset to any child who has leadership potential.

A discussion on leadership might be stimulated by asking pupils questions such as.

- What is a good leader ?
- What attitude does he need for working together with others ?
- Do different situations require different types of leaders ?
- How can one become a more responsible group leader ?
- Who are those who have such leadership potentialities ?
- What do they do as leaders ?
- What leadership opportunities are there for us in our class ?

The capacity to accept responsibility and leadership are developed empirically through practice. In the classroom, in the school

community and on the game-fields constant opportunities must be given to pupils to act responsibly. In schools it must be emphasized that the initiative of all pupils must be developed, not just the improvement of the bright and intelligent pupils to encourage their confidence and initiative.

Creative writing: Creative writing itself is a talent. A distinction should be made between creative and practical writing Practical or applied writing serves the immediate purposes of everyday life. In teaching applied writing emphasis should be placed on correct form, such writing should be clear, to the point and utilitarian Creative writing, on the other hand, is done for the enjoyment and satisfaction it gives to the writer and those who read and hear it. Emphasis should be placed on communicating feelings, impressions and moods. Poems, essays and stories are examples of creative writing

The process of creative writing should be broken down into at least two stages, i.e. the creative stage and the critical stage. The creative stage absorbs all the child's energies. All external barriers should be removed so that the student can feel free to express himself. In the critical stage, the writer would act as an editor to his first copy. The students must pay attention to the form of his writing as well as to the grammar, punctuation One of the barriers to creative writing is premature criticism. In the creative stage critical judgement should be suspended or it may stop the creative flow. After the writer has reached nearer to his creative effort he can criticize it and shape it to its polished form.

Teachers in general can stimulate creative writing in students by providing them with poems and stories collected over a period of years and advise them to read them aloud. They can also set up a creative hour in which students interested and involved in writing can join and share their work Appreciation should also be given to the students for wide reading and for reading creatively. Children can also be encouraged to submit their written poems and stories for possible publication

Talent in visual performance In this category, we generally include art, drama, music, etc

(*a*) Arts are a little more than the ornaments and the graces of our society In school, teachers should differentiate between two sources of artistic inspiration—the first comes from within the child, the other from outside himself. The inner resources (within the child) can include knowledge, insights and their life-time experiences, habits, personality and motivational attributes. In any talent-related activity, the appropriate set of inner resources can be activated and drawn upon to yield the highest level of functioning in that talent area Students at various stages of school life, can be encouraged to discuss how they can translate their inner experiences and impressions into concrete art products. The teacher can ask pupils to look at various works of art and tell how the pictures make them feel. One barrier to artistic production in children is set up by adults who mistakenly impose their own art standards upon them. It is necessary to encourage children to be free with their ideas and surround them with an atmosphere that is free from fear of failure, Since art is such a personal experience any critical rejection of art product is likely to be taken by the child artist as a rejection of himself. Pupils, invariably, need stronger support in their artistic activities, particularly in the early stage of development. Therefore, adults should be generous but judicious with their praise. Langer (1953) states: "precisely where we do not understand other people's

expression what is actually required is an expansion of our powers to appreciate a person, an institution, a work of art on its own terms". Teachers and other interested adults can encourage artistically able children simply by having a good supply of basic materials on hand : cryons, paper, paints, clay. Scrap materials too will stimulate various kinds of art expression in artistically able children.

(*b*) In creative dramatics, children act out their own roles, the plot may be a real-life situation or a popular story Stories that children themselves write are often suitable for the plot There is no script. Here, the primary benefit goes to those who are actually acting in the play Technical dramatics, on the other hand, is the traditional play with a written script, a cast of character, a more or less elaborate staging. Acting can be done in regular classes if the teacher has the proper initiative. Here, role-playing is also very helpful. The teacher can refer any talented child actor to a children's theatre, if there is one. He should discuss with parents' their children's ability and interests.

(*c*) Planning and giving classroom programmes is a good way to stimulate interest in music. Listening to records, going to musical concerts, operas and other musical events enhance the role of music in the lives of children. Making musical instruments, studying the scientific aspects of music and musical instruments, meeting with the talented musician from nearby orchestras are some of the important activities that can be taken up by students involved in music.

Psychomotor activities: Talented persons in the psychomotor area consist of those who have demonstrated high ability or attainment in areas such as sculpture, mechanics or athletics which require either gross or fine motor coordination. Missouri has, however, limited the psychomotor area by ignoring athletics. We cannot, in fact, ignore athletics (which represent gross motor coordination) in psychomotor area as it is a socially desirable and highly prized talent both in our country and abroad. The mechanical area is closely related to scientific or engineering talent. This category includes manipulative skills, spatial ability, ability to perceive a visual pattern and to observe similarities and differences.

The wood-work and metal-work shops should be considered part of the laboratory set-up in the schools and located near the science clubs. Facilities for games' instruction should be available to encourage those students who have an inclination toward this talent area. A constant positive reinforcement, for the athletes, works tremendously as an incentive for further talented accomplishment in this area. In return for performance, the athlete receives praise, recognition and respect—all of which adequately satisfy his or her emotional psychological needs. And as Smith (1976) relates this recognition and attention cast upon even some high school athletes comes very close to subservience and compliance.

Parent-teacher relationship: Parental interest was repeatedly identified as being the major factor which affected the children's level of attainment at school (Dougal 1964). 1964). It was observed (Friedman 1952) that high achievement orientation is created by the direct transmission of achievement related attitudes by the parents. Studies conducted in the Indian context (Mathur 1970, Sen 1971, Naik 1975, Singhal 1977) have illustrated that teachers play a major role in the educational system. Teachers, as human engineers, can assure promising leadership roles and can help to introduce some qualitative changes in education, making it more meaningful to the

developmental needs of the society at large. A distinction can be made (Baumarind 1966, Fiedler 1967 and Sinha 1977) between three leadership styles in the Indian setting: authoritarian, nurturant task leader and participative (permissive). These three types of leadership styles are equally applicable to parents and teachers. Strong punitive measures may act as an inhibitory force, while complete permissiveness may lead the students astray. In such a situation the nurturant task leadership style seems ideal for bringing about the required intellectual commitment among students. Teachers and parents as nurturant task leaders can initiate their young people to task-completion with love, understanding and a sense of responsibility.

Schools, invariably, expect and want informed support from parents. The behaviour of an ideal parent would be that of someone who is lively, informed, supportive and open with the school, who takes an interest in all school activities but does not believe every word his child says—comes to ask the teacher when anything worries him and makes an appointment. An ideal parent has respect for the teacher, his methods and an appreciation of the time teachers give to their work. Teachers, in Parent Teacher Association (PTA) can discuss with parents how the child-rearing practices adopted at home, foster in students dependence, passivity, hostility and creativity and how these qualities may, in course of time, become enduring characteristics of the students and influence their relationship with others as well as their performance in schools and colleges. The PTA through its constructive activities can bring about desirable attitudinal changes in parents and teachers and can influence them to make a contribution to the child's development. Some useful suggestions for this are given below:

- more formal and private talks should be arranged, preferably twice a year
- open days should be held at times to enable parents to attend
- parents should be given booklets prepared by the schools to inform them as to how they are being educated
- child's work should be observed by parents
- special efforts should be made to contact parents who do not visit the school.

SUPW in the School

The socially useful productive work (SUPW) introduced at the 10+2 stage in place of work experience has an important role where the needs of the child and the community are emphasized. The Ishwar Bhai Patel Committee has been very emphatic about it and so has Edgar Faure's Committee in *Learning To Be*. Prof. Malcolm Adisheshiah in his report has also been quite particular about this To inculcate positive attitude of team work, socially desirable values like self-reliance, dignity of labour, tolerance, cooperation, sympathy and to develop a desire to be useful members of the society and contribute their best to the common good are some of the objectives emphasized by Ishwar Bhai Patel Review Committee and Adisheshiah Report on SUPW, that are supposed to encourage socially prized productive work in general and nurture talent in leadership and psychomotor areas in particular.

Conclusion

We are going to face some serious challenges in the eighties arising out of the contemporary trends and the school must

grapple with such challenges. Recognizing, exploring, accepting and nurturing human excellence is one such challenge The school must undertake to prepare the students for a change towards a better world tomorrow. As we make the school activities more and more interesting and talent related, students will take an active interest in diverse areas of talent and this in turn can help to reduce the number of drop-outs and push-outs The school administrators, teachers, planners, guidance workers (or school counsellors) should consciously strive to recognize the vast area of non-academic talent described above and provide the necessary conditions in the school for nurturing it.

As we are concerned about the shortage of talent in our society, we must inevitably devote our attention to those who have not really been able to explory their talent fully. Talent under major non-academic areas should be sought out, not merely because the world and our nation need it but simply because it exists and it sometimes appears in near delinquents. American schools have, perhaps for this reason, been deeply concerned about the discovery and development of talent.

Talent (whether academic or non-academic) is of little account without opportunities and encouragement. Two main obstacles that stand in the way (in our ordinary schools) are: failure to inculcate positive attitudes and values for the recognition, acceptance and development of various non-academic talent areas and inadequate financial resources to enhance, in school, different talent-related activities. The third barrier, in fact, is the allocation of time to such activities which may temporarily hamper teaching-learning situation. But it is hoped that through proper and judicious planning we can in the long run succeed in achieving our goal-nurturing non-academic talent, the invaluable human asset of the society and the nation.

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Policy for the Periodic Change of Textbooks in India

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DESPITE current trends to impart education by making greater use of media like films, radio, television, the important learning resources for school children are still textbooks. This fact is applicable to almost all the countries. 'The textbook as a teaching aid' (*Unesco Education Abstract*, VIII, 6) pointed out the same thing in the following words :

> In recent years the importance of textbooks as an educational tool has become increasingly recognized alike by teachers and administrators. On the one hand, changes in the objectives of curriculum in eduational method and teacher training have resulted in a more critical evaluation of the adequacy of textbooks, and on the other hand, with the rapid expansion of education and the shortage of fully trained teachers, administrators have realized the need for textbooks of the highest quality.

Textbooks not only include within their covers most of men's accumulated knowledge, but they also present it in a form which is adaptable to any teaching-learning situation. They can be read and re-read at the pace suited to individual needs and abilities. In our country this is the only reading material which is easily accessible to majority of the school-going children, especially in rural areas.

In India, production of textbooks is no longer confined to small-scale operations of a few private entrepreneurs as was the case a few years ago. The central and state governments have mostly accepted the task in a big way to meet the increasing requirements of schools, primary to secondary including higher secondary, for textbooks in regional languages and English. As textbooks occupy an unique position in the process of teaching and learning, the quality of education is significantly controlled by the quality of textbooks. It is, therefore, necessary to examine the suitability of textbooks from time to

time for answering the quality of both content and format of the textbooks.

There is a rapid technological and scientific change all over the world and this specificall affects the development of developing countries. There remains a big gap between the knowldge imparted through textbooks and the achievements in the field of science and technology if they are not included in the textbooks at the appropriate time. Textbooks as a tool of education should always be changed over a certain period of time to meet this requirement and to fill the gap.

The present study has been conducted to know the range of period regarding the change of nationalized and recommended textbooks fixed by the states and union territories. There are wide differences among the states in this regard. The data represents only 19 states and six union territories. The data has been given in the tabular form with the percentage of the states and union territories follwoing different periods of time for changing the textbooks.

TABLE 1

RANGE OF THE PERIODIC CHANGE OF NATIONALIZED TEXTBOOKS IN THE STATES

Range of Period	*States*	*Number of States*	*Percentage*
1-3 years	—	—	—
3-5	Andhra Pradesh, Karnataka, Maharashtra, Nagaland, Orissa	5	21.74
5-8 years	Gujarat, Kerala, M.P., Rajasthan (secondary and higher secondary level), West Bengal (primary stage)	5	21.74
No fixed range	Assam, Bihar, Haryana (IX-X), Panjab (primary, middle), Tripura, U.P. (primary and middle)	6	26.09
States which mostly follow NCERT textbooks	Andhra Pradesh (V-VIII), Haryana (I-VIII), H.P. (only in English), Sikkim	4	17.39
Absence of nationalized textbooks	Himachal Pradesh, Meghalaya, Manipur	3	13.04

It is clear form Table 1 that not a single state changes its textbooks within a period of three years or less. Five states change their nationalized textbooks within the range of 3 to 5 years. Another five states, viz. Gujarat, Kerala, M.P., Rajasthan and West Bengal change their textbooks between five-eight years. In Rajasthan the textbooks of secondary and higher secondary level and in West Bengal the textbooks of primary level only are changed within the renge of five-eight years. There are as many as six states (26.09 per cent) which have not fixed any specific period for changing these textbooks. Four states

(17.39) follow the textbooks prepared by NCERT, of course, some of them for a particular level only. Three states, viz H.P., Manipur and Meghalaya do not have nationalized textbooks.

So far as union territories are concerned, three, (Delhi, Lakshadweep and Mizoram) change their textbooks within a range of five-eight years. Rest of the Union territories either follow NCERT textbooks or the textbooks being prescribed by other states.

TABLE 2

RANGE OF PERIODIC CHANGE OF RECOMMENDED AND APPROVED TEXTBOOKS IN THE STATES

Range of Period	*States*	*Number of States*	*Percentage*
1-3 years	Punjab (at secondary and higher secondary level)	1	5.55
3-5 years	Himachal Pradesh, Maharashtra (for private publishers only), Nagaland, Tripura	4	22.22
5-8 years	Kerala and Rajasthan	2	11.11
No fixed range	Assam, Bihar, Haryana, Manipur, Sikkim, U.P. and West Bengal	7	38.89
Absence of recommended and approved textbooks	Andhra Pradesh, Gujarat, Madhya Paradesh and Meghalaya	4	22.21

As is evident from Table 2, majority of states (38.89) do not have any fixed policy regarding the periodic change of recommended textbooks. Next highest percentage (22.22) is of those states which change their recommended textbooks within a range of three-five years. Equal percentage (22.22) is of those states which do not have recommended or approved textbooks as such. Regarding union territories, Mizoram and Lakshadweep change these recommended textbooks within a range of three-five years and five-eight years, respectively. Other Union territories either do not have such books or follow the textbooks recommended by other states.

The analysis of the foregoing data regarding the policy for the periodic change of textbooks, presents a very scattered picture and at the same time it becomes difficult to draw an over-all conclusion due to heterogeneous nature of information. However, it can be observed that no state changes its nationalized textbooks within a period of three years. Five states and two Union territories change their nationalized textbooks between five-eight years.

As many as six states do not have any fixed policy for this change. Most of the union territories and a few states either follow the textbooks prescribed by other states or prepared and published by the National Council of Educational Research and Training, New Delhi. So far as recommended and approved textbooks are concerned, in seven

states there is no fixed policy regarding the period of change. In four states these books are changed within a period of 3 to 5 years whereas in other four states there are no recommended or approved textbooks as such.

Needless to say, there is a great need of changing the textbooks over a specific period of time. It is, therefore, highly desirable that all the states should develop some set procedure and policy to keep the textbooks uptodate, particularly in the area of life sciences and social science, keeping in view the latest researches and scientific and technological developments in these fields.

Curriculum and Creativity

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No TOPIC is of greater interest in educational circles today than creativity : what it is, how it reveals itself, how it can be detected, and how it can be developed. Its goal is self-fulfilment of each individual to the extent of his ability. The individual himself constitutes his own standard of creativity. In other words, to the extent that he measures up to his own built-in creative potential, he is creative.

It has been widely recognized that the development of true creative personalities should be the primary concern of education. But it is a pity that the present-day schools make little efforts to nurture the creativity of children so as to enable them to achieve intellectual excellence. On the other hand, these schools, by and large, stifle the creative potential of children The children have to suffer a lot on account of defective or inadequate content of curriculum and on account of inappropriate strategies used to implement the curriculum in the classrooms and to evaluate the pupils' attainments.

It is quite apparent that the creative abilities of chidren will have to be developed through the mechanism of curriculum. The term 'curriculum' is generally used interchangeably with the term 'syllabus' which in fact is only a part or component of the curriculum. In its wider sense, the term curriculum implies the sum-total of all experiences that are provided to the pupils or they themselves manage to receive from different sources. These experiences enable the pupils to achieve the objectives of education

The process of curriculum development begins with the formulation of objectives of education which are based on the ultimate aims of life, and also on the political or social philosophy and developmental needs of a country. These objectives are further specified in respect of different stages of school education and also in respect of different subjects at different stages of education. The next two steps in the process of curriculum

development are the determination of scheme of studies, syllabi, etc. and the preparation of instructional materials like textbooks, supplementary readers, work-books, teacher guides, etc. The next step is the implementation of the curriculum in the school. The last phase in the process is the evaluation of the curriculum for the purpose of quality control and also for the purpose of providing feedback to the curriculum developers regarding the strengths and weaknesses of the curriculum, which may prove useful for affecting suitable modifications in the curriculum. Thus, it is obvious that curriculum development is a cyclic process. It has to be planned, developed, implemented and evaluated in order to be planned again.

In psychology, meagre material was available about gifted and creative individuals before the second world war. During the war, people heard and read numerous stories of brave and dare-devil soldiers who surprised the whole world by putting up a masterly display of courage, creativity and imagination. They discovered best solutions even for most complicated problems. After the end of war, the psychologists were attracted towards the investigation of the wonderful ability which enables the human beings to make new inventions and helps them in finding solutions to even challenging problems.

It has now been recognized that a handful of gifted individuals rather than teeming millions of ordinary people, can play a more important role in the progress of a nation. It has become imperative for every nation to chalk out an adequate programme for providing right type of education to the children in a congenial environment so as to develop their creative potential. This realization has greatly influenced the educational systems all over the world during the last three decades and is most likely to exercise more and more influence in the coming years. As a natural corollary of it, all phases of the process of curriculum development have been deeply influenced by it.

As stated earlier, formulation of educational objectives is the first step in the process of curriculum development. The understanding about the nature of creativity has had its impact on the statement of objectives. It can be noticed that development of creative abilities of the child occupies an important place among the objectives of education formulated by different countries. The International Education Commission set the following four goals for the educational systems all over the world : (*i*) to encourage scientific humanism, (*ii*) to develop creativity, (*iii*) to develop sense of social commitment in the pupils, and (*iv*) to develop complete man. Thus, the ultimate aim of education in any country should be a 'complete man', which is not possible without actualization of creative potential It is true that man fulfils himself in and through creation, therefore, any educational system must be harnessed in the service of 'creativity', failing which the system will continue producing 'unfinished men' who may find it difficult to survive and evolve further.

The inclusion of 'development of creativity' in the objectives of education does not mean that the entire curriculum scene has appreciably changed because there is always some distance to travel between commitment to the idea and its transformation into practice. To cover the distance, different areas of school curriculum like content, methodology, evaluation, etc. will have to be suffused with the 'spirit' of creativity. The values that characterize the creative enterprise, such as 'longing to know, to understand, to think in novel ways, to reflect, to consider causes and consequences', should permeate instruction in the humanities and practical studies,

as well as in the sciences.

The idea of 'creativity' has some very important implications for the 'curriculum content'. What type of curricula should we have so as to enable the pupils to develop their creative potential ? Education which aspires to be imaginative is regularly faced with the age-old curriculum question : Is the educated mind a product of the 'how well' or of the 'how much' ? Ideally it should be both. However, such an ideal situation seems impractical because of the vastness of knowledge on the one hand and brevity of time available for learning on the other hand. If curriculum is to be geared to the development of creative potential, then our preference will have to be for a deeper vertical penetration by students into fewer curriculum areas in lieu of a superficial coverage of more areas. In the words of Inlow, "Education should transmit enough of the culture to enable the growing organism to adapt to life, after which the 'how-well' criterion should assume control. It is the qualitative way more than the quantitative way that makes possible such sophisticated outcomes in education as reflective thinking, creativity, and selfhood. These rely for accomplishment in time for contemplation and indepth involvement, neither of which is an ingredient of the 'how-much' approach". Thus, from the viewpoint of creativity, curriculum areas should be fewer and then in each area, there should be fewer topics so as to enable the pupils to deal with them more intensively. However, a current school practice that operates against curriculum quality is one of increasing the course loads of the gifted pupils. It is argued that they can cover more territory than can the average and slow. A better solution would be to make provision for intensification within the framework of the more normative curriculum dimensions.

The commitment to the idea of creativity has far-reaching implications for the 'management' or 'control' of curriculum. It has been argued that a high degree of bureaucratization is inimical to innovation and creativity. The key elements of bureaucracy (hierarchy and central control, division of labour, rules and regulations, and impersonality) are important for efficient mass-production of goods and services, while non-bureaucratic forms of organization are more suitable for tasks which cannot easily be routinized. On the other hand, to cope efficiently with unstructured tasks and to adapt to changing external demands hierarchy and central control should be de-emphasized, and individuals and local units should be given relatively greater autonomy in defining their role. Highly centralized system of curriculum development leads to uniform and fixed curriculum which is not helpful at all for the development of creative potential of pupils. The process of curriculum development will have to be decentralized and also will have to be made a continuous process if the thinking abilities of children are to be developed.

From the viewpoint of 'creativity', implementation of curriculum is more important than its development. To implement the curriculum in the classroom, the teacher has to make use of a few teaching-learning strategies. Needless to say that the strategies should be such as are conducive to the development of creativity. The strategies used by the teacher should enable the pupil to cross the barrier of 'learning' and leap into the territory of thinking. This will be possible if the methods used by the teacher are based on the principles of 'inquiry learning' which aims at making the child the subject of his education rather than the object of it Instead of being focussed on the learner, education must proceed from him. The child

must be enabled to become his own teacher by learning to initiate and direct his own learning. Having accomplished this, the child will continue learning throughout his life and will, thus, become a true citizen of the 'learning society'. In that case, he does not merely remain a recipient of acquired knowledge but will become the inventor or discoverer Thus the importance of teaching by discovery techniques can hardly be exaggerated, 'discussion' and 'role playing' are other techniques which a teacher can use to develop the child's thinking abilities.

While giving lessons on 'reading' in the field of language teaching, the teacher should see that the pupils become creative readers. Such readers invariably go beyond the reading material and think of suitable additions or alterations in the constant or in its arrangement or presentation. The teacher can ask the pupils to elaborate upon the subject-matter or reproduce it in a different format. The pupils can be persuaded to think how the reading material can be made use of in daily life and how it influences their lives. Sometimes, the pupils can be asked to rewrite a story or a drama after adding or dropping one or two characters or places of occurrence and by effecting changes in mutual relations of a few characters.

Right type of learning experiences are very essential for developing the creative potential of children. But how these experiences are provided is also equally important. This brings us to the question of organizational climate in the school. A permissive school climate is essential for the development of creativity because it acts to reduce unnecessary conformity which is inimical to creativity. Permissiveness provides opportunities to children to have open encounter with the unknown, unafraid of what it might bring. A creativogenic school encourages the pupils to be curious not only in the face of the unknown but also allows him to be skeptic before the alleged known. As a consequence of it, the child questions almost everything and spares almost nothing.

Many of the schools pay lip-sympathy to 'creativity' but adopt such questionable practices as relative marking, regimented class schedules, fixed curriculum content, and the shunting of slow learners into a manipulative type of curriculum It appears that these schools are more interested in stereotyping, regimenting, comparing, and mechanizing than in developing creators. It has now been realized that the influence of examinations ought to be diminished so as to make it easier for teachers to concentrate on the needs of the individual pupil. Public examinations impose considerable restraints on curricula in secondary schools. By giving undue prominance to those aspects of education which are examinable, they fail to encourage other important aspects of education which are non-examinable

If 'development of the complete man' is accepted as the ultimate aim of education, then the whole system of teacher education will have to be over-hauled so as to bring about attitudinal changes in the teachers. They face the natural human temptation to resist any change which may render their stock in trade obsolete They seek refuge in the *status quo* which provides them psychological security and saves them from the uncertainties which accompany the introduction of an innovation. They have to be trained to develop tolerance for divergence as well as for opposition and criticism. It will not be difficult to make the school a fit place for the development of creativity if the teachers who have to run on educational system, are able to become true creative teachers. □

Examinations in History

A Content Analysis of Secondary Level Question Papers

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SINCE Independence, history teaching at secondary school stage has undergone a process of metamorphosis. This chance is particularly pronounced in the area of formulation of objectives of history teaching at this stage It has been observed that there is a shift from 'exaggerated emphasis on political history, wars and battles, and uncritical and exaggerated importance attached to personalities' to 'the study and understanding of the dynamics of social development for which a broader perspective of history in all its aspects is necessary' (NCERT 1970) It is now realized that history is a multi-causal complex process. It involves most diversified, yet often connected, aspects of change in the political and social institutions, in the socio-economic order, and in the moral and intellectual climate History teaching is now considered to lead students to navigate in the unexplored seas, rather than to follow the familiar routes.

In educational systems objectives and evaluation are intimately related. Evaluation provides us with the continuous feedback, the extent to which the goals and objectives are attained. In case of examinations such an information may not be valid and reliable. Presently, at school stage and even at higher education, the assessment of progress is measured by examinations. In view of the above-mentioned observations the objectives of the present study were :

1. To analyse the part played by different types of histories at secondary school level in the State of Rajasthan for the years 1975-1979.
2. To study the implications of such types for the teaching of history.

Analysis of Question Papers

In this study, the question papers of secondary classes of Board of Secondary Education,

Rajasthan in the subject of history were taken up for the content analysis. This Board conducts the examinations for secondary and higher classes; it is one of the progressive Boards of the country known for its innovative practices. In order to carry out the content analysis, a category system developed by W.F J. Inglis (1981) at Stirling University was made as the base. This category system was developed on the basis of the main types of histories employed by the historians. The various categories employed in the content analysis are as follows with a brief description of each category.

Category A : Political History—this category comprises of three sub-categories such as : (*i*) A_1 : Foreign Politics—this comprises of issues related to history, which had a connection and relation with foreign countries in our affairs. (*ii*) A_2 : The Structure of Government—the reference being to how government works, the administrative reforms introduced, etc. (*iii*) A_3 Domestic Politics—this comprises of questions related to internal politics, contribution of various leaders.

Category B : Economic History—this category comprises of issues of history relating to economic condition of people, economic reforms, economic progress made.

Category C : Social History—social customs, in particular reference to living conditions, e.g. food, clothing, housing, etc.

Category D : Social History—social structure focussing on attempts to analyse the social structure of a community.

Category E : Religious History—aspects related to various religious movements, religious practices and religious reforms.

Category F : Cultural History—in particular the history of art, architecture, literature and various scientific developments.

Category G: Military and Naval History —the warfare techniques, arms and armaments used and developments in the use of various types of arms.

Category H : Geographical History—the role of geographical factors in history, geographical location of different places.

Category J : Archaeology—about the various archaeological finds, new centres of excavations, etc.

The secondary class history question paper of the Board comprises two papers—Paper I and Paper II. Each paper is of 75 marks and each paper is further divided into two parts —Part A and Part B In Paper I, Part A of the question paper has a weightage of 25 marks and the questions are based on multiple-choice and one-word answer type questions. The Part B of the question paper I has a weightage of 50 marks and comprises the questions based on short answer and essay type questions. The Part A of each question paper comprises of 24 questions, in which question Nos. 1-23 have a weightage of 1 mark, whereas question No. 24 has a weightage of 2 marks, the total thus comes to 25 marks. The Part B of the Paper I as mentioned above has short answer and essay type questions, having total number of 16 questions. The question Nos. 1-13 are short answer type, each question having a weightage of 2 marks. The question Nos. 14-16 have internal choice and each question has a weightage of 8 marks. In Paper II, Part A of the question paper is similar to that of Paper I. But there is difference in the Part B of the Paper II with that of the Part B of Paper I. In Part B of the Paper II there are 1-13 questions of short answer type with a weightage of 2 marks, but the difference lies in the fact that there are 4 questions based on essay type (Q. Nos. 14-17) with internal choice, with a weightage of 6 marks only.

The frequencies for different categories were computed separately for each question paper. These frequencies were further conver-

ted into percentages for each of the category as presented in the Table.

Discussion of the Results

The most striking conclusion from a study of the Table indicates the predominance of political history in all the question papers from the years 1975-1979. Within category A interesting trends are also evident. The most marked is the attention paid to domestic politics in the papers for all the years. This is followed by structure of government and foreign politics. It can be concluded that paper-setters for this sample of question papers have not, perhaps, transgressed the chalk lines of the traditional content question patterns, for example, the causes of downfall of an empire, establishment of a dynasty, wars of succession and about the individual achievements of kings and queens

Complimentary to the dominance of political history is the comparative neglect of other types of histories. There is a sporadic frequency of military and naval history, geographical and economic history and archaeology in the question papers, howsoever important their role may be in the process and study of history. Despite the wide range of activities covered by it including agriculture, industry, trade, transport and finance, economic history plays an insignificant role in all question papers for all the years uniformly. There are no questions pertaining to this type for the year 1977, whereas for the years 1975, 1976, 1978, and 1979 the percentage of marks assigned to this type varies from 4-8 per cent only. The somewhat similar status is assigned to social history (customs) which goes unrepresented in the year 1979 and has a considerably low percentage of marks varying from 4-8 per cent for the years 1975-1978. In comparison to social history (customs) the aspects of social history (structure) has found a respectable place in question papers for these years. If one were to rank these categories, the second and third place after political history would, obviously, be assigned to the category of cultural history followed by religious history. It is somewhat satisfying to see that there is a sort of uniformity of appearance of these two types in the sample question papers for all the years.

A study of the Table further indicates that it is political history with its different manifestations which is responsible for almost 60 per cent of weightage in these sample question papers for the years 1975-1979. The remaining 40 per cent weightage is distributed amongst other types of other histories and within these again the bulk of weightage is shared by cultural and religious histories. The three types which stand out for their neglect are economic, military and naval and archaeological histories.

Implications for the Teaching of History

The findings of this study have serious implications for the teaching of history. Howsoever enlightened may be the goals, the paper-setters have emphasized the activities of political leaders, domestic feuds, administrative reforms and given much less, if any, attention to other aspects of the past. In the light of these findings one can say that such a 'metamorphosis' in history teaching since Independence is of namesake and the practice of emphasizing political history at the cost of other types continues to be in vogue as previously

More specifically, the content of these papers is likely to influence the four distinct areas. First of all pupils will only receive a very limited picture of history as a subject and of the period they are studying. They are likely to be exposed to a monotonous diet of activities of political leaders, government and

TABLE

PERCENTAGE DISTRIBUTION OF MARKS FOR DIFFERENT CATEGORIES

		1975				1976				1977				1978				1979			
		Paper I		Paper II		Paper I		Paper II		Paper I		Paper II		Paper I		Paper II		Paper I		Paper II	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Category																					
A	Political history*	48	56	68	76	32	52	68	84	40	44	76	72	52	60	72	48	48	44	68	76
A_1	Foreign politics	12	14	36	36	8	4	16	32	—	18	12	36	—	—	12	4	—	—	8	8
A_2	Structure of government	12	8	12	—	8	24	8	4	8	10	16	4	12	10	12	8	—	18	4	8
A_3	Domestic politics	24	34	20	40	16	24	44	48	32	16	48	32	40	50	48	36	48	26	56	60
B	Economic history	4	—	—	—	4	—	—	—	—	—	—	—	—	—	—	8	—	4	—	8
C	Social history (customs)	—	—	—	4	—	—	4	8	—	6	—	—	4	—	4	4	—	—	—	—
D	Social history (structure)	—	6	4	—	8	4	8	8	4	16	—	8	8	10	12	24	—	4	—	—
E	Religious history	32	10	4	—	24	20	8	—	24	16	4	4	12	18	4	—	24	18	16	4
F	Cultural history	12	24	16	16	24	24	4	—	20	18	8	16	12	8	—	12	12	22	—	12
G	Military and naval history	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—
H	Geographical history	—	4	8	—	8	—	8	—	8	—	12	—	12	4	8	4	16	8	8	—
J	Archaeology	4	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—

*The percentage of weightage for category A is sum of three sub-categories A_1, A_2 and A_3

rulers of the past. Perhaps, it is unlikely that they would experience the full variety and excitement, either of the subject or of the past societies, and many of the new developments in the area of economic, archaeological and military aspects of history. Secondly, there is a danger that pupils will gain a biased picture of the period they are studying as the papers uniformly concentrate on political history, their emphasis inevitably centres on the affairs of the ruling groups in the society. In general such a ruling group was drawn from a hereditary aristocracy and the political debate was conducted mainly in their terms Thus there is a danger that pupils studying for such papers will be concerned mainly with the rivalries and activities of a small section of society and view it through their eyes.

There is a significant implication in reference to teaching methods. The content of the papers is likely to restrict the teachers' use of the more adventurous methods of teaching of history. Concentration on political history will obviously lead teachers to use the traditional methods of 'chalk and talk' and to deal with the content which would present a look of the 'telephone directory' full of dates and events related to these ruling groups. Such a content would give little encouragement to employ source and project methods which are more likely to flourish when the course deals with different aspects of society.

Finally, the pupils' ability to explain events in a particular period of history will be restricted by too much emphasis on politics. It is a truism to state that the different aspects of the past are interdependent, explanations in one field relying in part on a general understanding of other fields. For example, a full understanding of the nineteenth century political history of India is only possible if pupils have a knowledge of the social and economic structure of the period as well as the major religious and cultural issues of the times.

In conclusion, it may be observed that teaching of history should be the teaching of a synthesis dealing not only with political history but with all aspects—economics, social, artistic and cultural—of the societies of the past. □

Basic Characteristics of a Researcher

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THE pages of history are filled with he names of researchers who were led or lriven to their discoveries by consuming ntellectual curiosity, some compelling moti-/ation or single-mindedness of devotion. ndia has made tremendous progress in the ield of applied and fundamental researches n science, agriculture and engineering. Edu-:ational researches are still lagging behind. It is apt to say that educational researches are in its infancy in India at the present time.

We should acknowledge our indebtedness .o Dr. M.B. Buch and his colleagues and associates who did the pioneering work by publishing two volumes on educational researches in India. Currently we are making advances in the field of educational research and are definitely on the right track, for expecting good results from educational researches. The universities, NCERT, ICSSR, and the UGC have contributed to the growth of researches in India The educational researches are advantageous to the departments of education, ministries of education, schools colleges and universities as also to the growth of education as a discipline. The research-action-research-action has resulted into the formulation of new practices which solve educational problems and indicate the path of progress. In addition to this, research is beneficial in the development of the personality of the researcher. The basic characteristics developed by a researcher are mentioned below.

1. *Accuracy*

A research cannot be conducted without the quality of accuracy in the researcher. The higher the sensibility and accuracy in measurement, use of language, thoughts, skills, manipulation, observation, note-taking and recording, the better it is for the researcher. Accuracy is acquired by taking care of the minute details. In order to develop accuracy the researcher has to develop the power of concentration. Alertness is also required for this.

2. *Problem Solving*

The researcher is always optimistic in his approach. He has faith in solving problems by finding facts and further working on it. The researcher has to learn this quality. This requires adaptability of mind to work in different directions for solving a particular problem. There are several ways of solving a problem. The researcher identifies all the possible ways and takes further action on one or a couple of ways. With serenity and with emotional poise the researcher has to make attempts in solving problems of procedure, sampling, collection of data, etc.

3. *Love for Truth*

A researcher has to develop love for truth. He has to discover the truth after passing through many complicated issues and difficulties. Finding the truth is the reward of logical thinking, insight, inner feelings and inner urge. One who has a genuine love for truth can only become a researcher. The quality of mind to accept the truths even though they may be contrary to one's desires, conventions and beliefs is really worth eulogizing. The researcher also learns that there are various ways in discovering the facts and the truths.

4. *Experimentation*

A researcher does not believe in hearsay or opinions of people. He believes in finding out the facts and truth through his efforts. He tries to put to test and experimentation every idea or phenomenon. Experimental mindedness is required in a researcher. This is also called empirical mindedness. Experimentation is the key of success in the domain of advancement in education, science or humanities.

5. *Intuition*

It is a quality of mind. In finding the ways of studying a problem in depth, sometimes intuition is a greater guide than the power of reasoning Lot of knowledge a researcher gains of a phenomenon by delving upon it deeply. Intuitive knowledge adds to the power of reasoning and thus enables the researcher to be in possession of greater facts Intuition is definitely a great characteristic developed in a research student.

6. *Challenging the Axiom*

A person who challenges the accepted axioms would do well by trying to prove what he does not accept. Einstein once remarked that he did all the things in order to challenge the accepted axioms. In the field of educational practices we continue to follow certain theories which, if challenged, may result in greater insight into the process of learning. Prof. Galbraith (1982) said that the third world countries should "challenge the belief that what is right for the advanced industrial countries is right for all."

7. *Perseverence and Patience*

A quality of perseverence is needed in research. A person who gets disheartened by obstacles and difficulties and starts blaming the environment can never do research work. A strong conviction and faith in one's work is required for continuance in research. Patience is required in abundance if one wants to see significant results.

8. *Divergent Thinking*

In attempting the research work, a researcher has to develop in him the quality of thinking deeply as also thinking in various directions. Visualizing the various facets of

the problem is necessary in research. The research work requires thinking on those directions where others had not thought or about which people know so little. A person can never try various ways of finding facts unless he has developed the quality of divergent thinking.

Dash or Drive

An exclusive quality of devotion is needed in research work. A researcher has to develop a dash and a drive to follow his path by keeping himself away from usual pessimistic thoughts or remarks of those who are close to him. This dash makes the researcher work long hours in day or night. Powerful motivation and sustained concentration is required to carry on research work. Intensive work for sustained hours with concentration is another need for research work. We have examples of many scientists who did marvellous work in the course of their hard days and in the presence of physical handicaps.

10. *Churning the Ideas*

In research one has to put several assumptions and hypotheses (which are developed by churning) to test and objective scrutiny on some standard criteria. Observation and interview techniques adopted in research are great sources of ideas for the researcher and by working methodically on it, the researcher gets novel facts and phenomena which are extremely valuable to him and which provide unique and rare type of delight and inner satisfaction. This is called the gift of *joy* which is acquired by the researcher in the course of his research work and which motivates him to go ahead in his chosen field of investigation.

Future Ahead

The individual researcher has a vast field for his investigation. The process of education is very much related to the problems of human understanding of one's own self, the individuals around him and the socio-cultural and economic problems all around. Deep insight is needed to understand the processes of education in this complicated social milieu and greater drive is needed in trying to reshape the social processes in the desired direction by human efforts and research. The challenge is great but we have the capacity to cope with it if we have the faith, sincerity and the drive to do it. Researchers will continue to provide the field of education with valuable enlightenment for utilization. This hope is expressed beautifully by Yadav and Menon when they say that "educational research is moving towards an era when it can be expected to make a more direct impact on improving the educational system, making it substantially contributory to the solution of problems in the society at large." Our pious and fond hope is this but it is also strengthened by our conviction and faith in it. The NCERT through its Educational Research and Innovation Committee (ERIC) is giving fillip to this programme by providing financial assistance to educational researchers and also by disseminating research through its journals. □

Contemporary Significance of Value Education

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THE problem of value education of the young is assuming increasing prominence in educational discussions during recent times. Parents, teachers and society at large have been concerned about values and value education of children. Education is expected to play a major role in promoting national development in all its ramifications. At the same time it should bring harmonious development of all the faculties towards adequate preparation for life. The present situation of India demands a system of education which apart from strengthening national unity must strengthen social solidarity through meaningful and constructive value-education.

The world-wide resurgence of interest in the value education has been explained as the natural response of the modern industrialized societies to the serious erosion of moral values in all aspects of life and the crisis of values experienced in modern times It is now a common place to say that sweeping political, economic and social changes have overtaken human civilization during the past few centuries and these have been largely responsible for the predicament of the modern man In the case of India, however, the picture appears to be slightly different. While there is no doubt that technological development, however little it might be compared to the western societies, is one factor that has contributed to the value crisis that the Indian society is facing today, there are also other factors like personal greed, meanness, selfishness, indifference to others' interests and laziness that have brought about large-scale corruption in almost all spheres of life—personal and public, economic and political, moral and religious. One can even say that our fall in moral standards is not so much due to industrialization as to the lack of it. Perhaps, we can achieve a better moral standard in our democratic way of national life if we become more industrialized and thus overcome mass poverty and the general feeling of insecurity which gives rise to greed.

We are witnessing tremendous value

crisis throughout the world today. A lackadaisical attitude towards value and its institutions is ubiquitous everywhere in the world today. As the vitality of human belief in values is dying out in every land, the younger generation has started to pooh-pooh the unique religious epics of antiquity and religious institutions giving room for corrosion of godliness and erosion of spiritual and moral values of mind eating away the vitality and vigour of life. As a result, the mind of man has been laciniated and divided into small fractions and fragments which makes the value content of human life a diminishing factor in modern times.

The reappearance of barbaric qualities of selfishness, clashes and conflagration and other destructive forces which are burning the society give clear indication of the degenerating process of human society. Now, there is urgent need for a great effort to revive and reform the values of human life and to rejuvenate the foundation of the new civilization.

Concerted efforts and continuous dependence on good books and institutions will give students sterling and inspiring qualities of concentration, infinite love, justice, honesty, purity, selflessness, wisdom, faithfulness, humility, forgiveness, mercy, trustworthiness, respect for others, obedience, sincerity and a host of other virtues which are sine qua non to build the equipment of life. This should be the central theme of value education. Whatever be the cause of the present value crisis, there is no gainsaying the fact that the weakening of moral values in our social life is creating serious social and ethical conflicts It is this changing context—the declining moral standards in personal and public life on the one hand and the national ideological commitment to the values of democracy, socialism, secularism and modernization on the other—that constituted the driving force behind the recommendations stressing the importance of value education in educational institutions.

While there is general dissatisfaction with the fall in moral standards of both young and the old and disenchantment with the disregard to moral values witnessed in personal and public life, there has been no concerted attempt on the part of the society to address itself squarely to the problem of value education. Unfortunately, education is becoming day by day more or less materialistic and the value traditions are being slowly given up. A modern Indian is being educated mainly with the bread and butter aim of education as a result most of our graduates run after money, power, comforts without caring for any type of values.

The degeneration in the present-day life, the demoralization of public and private life, the utter disregard for values, etc. are all traceable due to the fact that moral, religious and spiritual education is being deliberately neglected by our educational system.

The Education Commission of 1964-66 says that "a serious defect in the school curriculum is the absence of provision for education in social, moral and spiritual values" In the life of the majority of Indians, religion is a great motivating force and is intimately bound up with the formation of character and the inculcation of ethical values. A national system of education that is related to life, needs and aspiration of the people cannot afford to ignore this purposeful force. Value crisis of the present-day life are baffling the minds of educators and the educands as well. The effect of the value crisis on the present-day life is witnessed in the following :

—The democratic ideology that has been accepted by our country is yet to be

actualized in the form of social and economic democracy, as to realize democratic values guaranteed by the constitution of India.

—The individual is becoming a prey to the contradictory values and is being converted as a consequence as an extreme radical, a reactionary, a sceptic or cynic.

—The present Indian educational system is reflecting more or less borrowed ideologies and philosophies and the national values are relegated to the back.

—The teacher-educators and teachers are not being clearly oriented to the national values and ideas, ideals and ideologies that they have to inculcate in the students. Hence, they are not in a position to play their role as value-educators.

—The student community is drowned in neck-deep poverty, ignorance and unhealthy surroundings. Hence, they are not in a position to comprehend the real values of our contemporary India.

—Our curriculum does not reflect human values and value system, hence our schools and colleges have become examination centres and not value centres.

The problem with value education, it appears, is that while everybody is convinced of its importance, it is not clear as to what it precisely means and what it involves In our educational reconstruction the problem of an integrated perspective on values is pivotal, for its solution alone can provide organic unity for all the multifarious activities of a school or college curriculum and programme An integrated education can provide for integrated growth of personality and integrated education is not possible without integration of values.

In value education, as in any other areas of education, what is asked of the teacher is a total commitment to the development of rational autonomy in both thought and action.

It should be noted that the most important aspect of value education consists not in unwilling adherence to a set of rules and regulations but in the building and strengthening of positive sentiments for people and ideals Value education should prepare individuals for participation in social life and acceptance af social rules.

Lastly, what is more important in value education is that schools should provide a healthy climate for sharing responsibilities, community life and relationships. □

Issues in Teaching Geography

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THERE are selected issues in teaching geography which need identification. Each issue needs careful analysis with attempts made at achieving synthesis. Which issues may be relevant to consider?

Objectives in the Teaching of Geography

Selected educators believe that objectives need to be stated in a highly precise manner. Programmed learning advocates would come in this category. In a programmed textbook, the pupil might then read a short paragraph, view a related picture, and respond to a completion item. The correct answer given by the programmer may now be viewed. If the pupil was correct in responding, reinforcement is in evidence and the learner can now proceed to the next sequential item. If the pupil was incorrect in his/her response, the learner knows the correct answer and is also ready for the next item in linear programming. The same/similar procedure is utilized again and again in the use of programmed items—read, view a related picture, respond to a completion item, and check one's written response with that given by the programmer.

Programmed learning emphasizes the following:

1. Each response given by pupils is measurable as to its correctness or incorrectness.
2. Objectives for instruction are determined solely by a programmer.
3. Sequential steps of learning are arranged so that each pupil makes few errors in field-tested materials.
4. A pupil knows almost immediately if a response given is correct or incorrect. Feedback to pupils is instantaneous and continuous.
5. Pupils are not to practise incorrect learnings. Before beginning the next sequential step of learning, a pupil knows the correct answer to a previous item of instruction.

Programmed learning is one form of behaviourism as a psychology of instruction. The

environment is very important in instructing pupils, according to behaviourists. Thus with sequential objectives to attain, pupils may be successful in learning. Sequential items are arranged in small increments. Reinforcement is involved when learners are successful in achievement.

A first cousin of programmed learning is using measurably stated objectives written by the teacher The scope of content from one measurably stated objective to the next covers more breadth as compared to one programmed item to the next ordered item in sequence.

The teacher writes sequential precise objectives for pupils to achieve in according order of difficulty. Learners are pretested on the measurably stated objectives. Objectives may be adjusted as to being written on an easier or more complex level based on learner results. The objectives may also remain as originally written. The teacher then chooses learning activities for pupils to attain the desired ends. Learning activities must be chosen to guide pupils individually to achieve each desired objective. After instruction, the teacher can measure if a pupil has or has not achieved an objective. If the learner has been successful in attainment, he/she may move on to achieving the next sequential end. An unsuccessful learner may well require a different teaching strategy After modified instruction to provide for individual differences, achievement of the learner may again be measured to determine if the specific objective has been attained Learners individually must be guided to be successful in attaining each sequential objective in ongoing units of study. There are, of course, pupils who need more assistance from teachers and parents to achieve each measurably stated objective, as compared to fast learners. Fast learners can achieve an increased number of objectives. Quality learning experiences always need to be in evidence. The experiences chosen must guide pupils to attain each measurably stated goal.

Humanism, as a psychology of learning, emphasizes pupils developing proficiency in making choices and decisions. The use of learning centres might then become relevant. In a unit of study emphasizing geography as the core academic area, pupils individually may select to work at the following centres, sequentially : (*i*) map and globe centre, (*ii*) conservation centre, (*iii*) urban living centre, (*iv*) pollution centre, (*v*) rural areas centre, (*vi*) natural disasters centre, (*vii*) wildlife centre, (*viii*), climate centre, (*ix*) travel centre, and (*x*) farming centre. At each centre, pupils may select which tasks to pursue sequentially. An adequate number of activities needs to be in evidence so that pupils individually may truly choose which sequential tasks to pursue and which to omit. A humane geography curriculum is being emphasized if pupils may choose and make decisions.

Learners need to develop feelings of an adequate self. The personal feeling dimension of learners is of utmost importance. A. H. Maslow, a leading humanist, emphasized the significance of meeting needs of each learner before optimal achievement can take place in ongoing units of study. The following needs must then be fulfilled on the part of each pupil :

1. Physiological needs (adequate nutrition, sleep, clothing, and shelter)
2. Safety needs (feelings of security from harm)
3. Love and belonging needs
4. Esteem needs (feelings of being valuable)
5 Self-actualization (becoming what one wants to become)

Pupils do better in school if personal and social needs are being/have been fulfilled.

Learning Activities

Learning activities need selection to guide pupils to achieve objectives. Should a subject-centred curriculum be emphasized in the geography curriculum? Or, should projects and activities prevail in ongoing units of study? In a subject-centred geography curriculum, rather heavy use of reputable textbooks may be emphasized Also, excursions, films, filmstrips, slides, transparencies, library books, and other reference sources may be utilized as learning experiences to provide for individual differences. Pupils with teacher guidance might than learn relevant facts, concepts, and generalizations in a subject-centred curriculum.

To emphasize projects and activities in the geography curriculum, the teacher may have pupils construct relief maps and globes, make models, develop diagrams and drawings, participate in dramatizations, be involved in construction activities, and engage in research experiences. The teacher may wish to synthesize philosophies in using subject-centred and activity-centred methods of teaching geography.

A second problem involving learning activities in the geography curriculum involves organization of the subject-matter. Should geography be taught as a separate academic discipline? Or, should geography be related to other social science disciplines in ongoing units of study?

Advocates of a separate subjects curriculum emphasize that :

1. geography can then receive its fair share of time in the school/class setting,
2. geography, as do other academic disciplines, has its own unique scope and sequence,
3. geography may be taught in depth rather than using survey approaches in teaching-learning situations,
4. teachers can specialize in teaching a specific academic area.

Disadvantages given for advocating a separate subjects curriculum include the following :

1. Individuals in society perceive content as being related. Academicians attempt to divide the subject-matter into component disciplines.
2. Knowledge perceived as being related is retained longer by learners as compared to content taught as separate subjects.
3. The subject-matter is used to solve problems as compared to acquiring content as an end in and of itself.
4. There are teachers who believe in integrating rather than emphasizing separate academic disciplines in teaching.

A third problem in selecting the subject-matter in ongoing units of study in geography involves the issue of essential, basic learnings in the curriculum There are educators and lay people who advocate teaching the basics rather than frills and fads. Thus, it is believed that a core of subject-matter can be identified which all pupils need to master. These are necessary learnings for individuals to function well in society. Identifying basic, essential content in the geography curriculum emphasizes eliminating trivial subject-matter in each unit of study. Agreement than can be reached upon which core learnings pupils need to attain in geography, according to essentialists.

Opponents of a basics curriculum state the following :

1. Each pupil has unique subject-matter needs. Core content for all learners to acquire cannot be identified.
2. Curious learners identify questions and problems in teaching-learning situations. The questions and problems may well bypass attempts to teach basic, essential subject-matter.
3. The geography curriculum can become quite formal when teachers emphasize a core of subject-matter learnings solely or largely. Pupils individually with teacher guidance also need to select and work on purposeful projects and activities. Individual differences among learners need adequate attention.

Evaluating Pupil Achievement

Who should be involved in evaluating pupil progress? The teacher solely could evaluate achievement. Thus, the teacher may write measurably stated objectives, teach for these ends, and evaluate if the desired goals have been attained by pupils. Teacher written test items (true-false, multiple-choice, completion, matching, and essay items) may be inherent in measurably stated objectives, to evaluate learner progress.

Toward the other end of the continuum, pupils may be rather heavily involved in evaluating their own achievement. Each pupil with teacher guidance might then appraise the quality of his/her written business or friendly letter, poem, story, play, outline, and paragraph. A learner may also be guided, with teacher assistance, to appraise his/her achievement in developing and completing a mural, diorama, frieze, pencil sketch, pantomime, and/or construction project. Thus, in a subject-centred or project-centred curriculum, learners with teacher help may be assisted in appraising their own achievement.

In Conclusion

Teachers, principals, and supervisors need to analyse diverse issues in developing the curriculum. After thoroughly evaluating the pros and cons pertaining to each issue, a viable synthesis and solution needs to be implemented. Proposed solutions should guide pupils to develop optimal achievement in the geography curriculum. □

Educational News

Education in Japan

In Japan as one of the highly developed capitalist countries, nine-year education from the age of six to fifteen years is compulsory. As shown by the fact that the enrolment rate to upper secondary school amounts to 94 per cent and that to higher education, i.e. universities and junior colleges amounts to 37.9 per cent, a high level of national education has been achieved.

This has been achieved only by a high social productive power which was developed by the working people of Japan.

Whereas education has been popularized in quantity, there exist many serious problems with regard to quality Throughout the 1970s, the decline and stagnation of basic school attainments by students became an object of public concern ; the weakening of physical strength despite the improvement of physical condition ; juvenile delinquency and suicides among lower age-groups ; increase of violence both at school and at home Not only teachers but also more and more parents and people in Japan have been making efforts to overcome this serious and critical situation of school youth,

However, the ruling circles of Japan who not only exploit the Japanese working people but also the peoples of developing countries, have been promoting a policy of encouraging meritocracy and selection in education , enforcing the narrow-minded morale of the ruling circles such as so called 'patriotic sentiment', 'national defence interests', 'diligence', etc , controlling activities of teachers in favour of such an education.

We Japanese teachers, have to make out best efforts, with the support of and in cooperation with parents and the population as a whole, to overcome the serious situation of school youth and to ensure the basic guarantee of the full personality development of every child. At the same time, we have to cope with the task of changing the reactionary educational policies of the ruling circles.

We hink that the material conditions exist and that it is possible in the highly developed societies to guarantee youth opportunities for a high level of education and to guarantee the full development of their personalities. Needless to say, all

efforts for the implementation of these aims will sharply collide with the policy of the ruling circles.

Full Development of Personalities as an Aim of Education

As already affirmed by the Universal Declaration of Human Rights (1948), the International Convention on Human Rights (1966) and other international conventions on human rights, the right to education is nothing but the right of a human being to full development. From the viewpoint that this is the right to the development of a future citizen who is to assume various rights, it might be considered as the most important of all human rights If, however, the right to education is formally guaranteed, does this mean that the right to full development is also guaranteed? We must answer this question in the negative The working people must above all be guaranteed the indispensable right to live as well as the right to work for the production of material and spiritual values essential for life In order further to enrich the implication of the right to live and the right to work, the child has to be guaranteed the right to study for acquiring the results of human culture such as science, technology, skills and art. These rights are inseparably interlinked So is the implementation of these rights and the right to full development The implementation of the right to full development depends on the extent to which right to live, the right to work and the right to study have been materialized.

As a matter of course, full personality development cannot be genuinely implemented in societies dominated by capital and exploitation of the labouring power of the working people. The possibility for the assertion of that objective is confined to extremely limited spheres, since the ruling circles are trying to reduce the guarantee of those rights to the lowest possible standard or to neglect them.

Despite these facts, however, the working people have demanded the assertion of these rights and fought for that demand.

Under capitalism the assertion of education which aims at the full personality development has become a central issue in the conflict between the supporters of reactionary education for the benefit of the ruling circles and those of democratic education for the benefit of the subjected working people

Tasks of Democratic Education in a Highly Developed Capitalist Country

On the basis of theoretical affirmation of the right to full personality development as an aim of education and the way to achieve it, I would like to state that the material conditions for guaranteeing full personality development have been obtained to a large extent. However, the ruling class has tried to keep the standard of that achievement as low as possible, or to make it serve their reactionary demands.

In the first place the ruling class in Japan has attempted to promote meritocracy in the school system, i.e. to make it a means of discrimination and competition Thus, they tried to reinforce an education to bring up 'creative leaders' and/or 'men of high intelligence' on the one hand, and a working 'mass' who operate with reliable activity under the leadership of the above-mentioned 'elite' on the other hand.

The ruling circles tried to justify their policy by giving publicity to an unscientific ideology according to which "there are differences of talents among human beings which are mostly innate". They have even reinforced the attack against the concepts of teechers and the general public of democracy in education,

Opposing these reactionary demands of the ruling circles, the Japan Teachers Union has been fighting for the implementing of the following urgent demands:

1. Democratization of school systems in order to enable teachers to organize studies and various activities in a democratic way and to guarantee a well-balanced and full development of school attainments and physical fitness of every child.
2. To make upper secondary education (15-17 years of age) compulsory in order to enable all young people to acquire various capacities required by a responsible citizen in a highly developed society. We have above all opposed the attempt to make school into a scene of discrimination and competition, attaching importance to the enrichment of school as an institution to guarantee the independence and development of every child and adolescent through 'mutual respect and cooperation' (Article II, The Fundamental Act of Education).

In the second place, closely connected with the above-mentioned undemocratic reorganization of the school system the reactionary demands of the ruling circles are reflected in the reactionary control over the curricula of school education. The characteristics of those demands lie in the policy of preventing the acquisition by every child of the foundations enabling acquaintance with highest standard of culture, science, technology and art, and instead in lowering standards and reserving the acquisition of culture to a limited number of 'gifted' young people.

Another characteristic feature is the enforcement of 'service activity' and 'study through work-experience as measures against misconduct and for training labour forces. Although foreign languages are taught to almost all students as one of the basic subjects for the entrance examination, this is not a compulsory subject in the present curriculum both for lower and upper secondary students.

Opposing the narrow 'patriotic' education which imposes on the young generation views based on militaristic and economic concepts of the power politics of the ruling circles, and also against the enforcement of 'service activity' and 'study through work-experience' intended as measures against misconduct and for the training of labour forces, our Union has been fighting demanding professional freedom of teachers and curriculum for developing the young generation on the basis of equality and with an individual personality as responsible future citizens in line with internationally and historically affirmed human rights.

Faced with various forms of distorted development of the child and youth caused by their separation from real life and productive work, our Union considers that the most important task is the organization of education and training in a way as to encourage independence through group work and association with the experience in life and work.

The third characteristic of educational control by the rulling circles of Japan is the burdening of those who receive education with the payment of part of the costs.

At present, instruction and textbooks are free at the level of compulsory education However, parents were compelled to cover expenses of Y 69,000 at elementary school level and of Y 97,000 at middle school level in 1978. In the case of high schools, parents were compelled to pay more than Y 144,000. The overwhelming majority of post-secondary educational institutions, i.e. university, junior colleges and vocational training schools, are private schools and the financial burden of students and/or parents far exceeds their capa-

cities. The annual tuition fees of private universities in which approximately 75 per cent of the students are enrolled averaged Y 300,000. When we compare the amount with that of the average monthly salary of Japanese male workers, i e. Y 176,400, you can see how expensive tuition at private universities is.

The Japanese Government ratified the International Convention on Human Rights in 1979. On the occasion, the Government 'reserved' the ratification of b and c of section 3 of Article 13 concerning gradual shift to free secondary education and higher education. This Government attitude shows the policy of the ruling circles to deny and suppress the principal of democarcy in education which aims to assert equal opportunities in education mainly by means of public expenditure to guarantee the people's right to education.

Our Union has conducted fighting actions, demanding that the State and local self-governing bodies should take various measures to reduce the financial burdens of parents for education.

Parallel with this struggle, we have pushed forward the movement to improve educational conditions and working conditions of teachers including the reduction of class sizes from 45 to 40 for the time being. As shown by the low growth rate of the educational budget for 1981 by 4.73 per cent in comparison with that of the military budget of 7.614 per cent, we think it is urgently needed to promote a broad campaign mobilizing further teachers, parents and workers against the militaristic and reactionary government policies to cut expenditure for education and welfare and to increase the military budget.

Fourthly, I should speak about the internationalization of education' as the main line of the education policy of the Japanese ruling circles. Although the Government emphasizes the importance of 'education for international understanding', its main concern is the promotion of an education needed by Japan as a major economic power to advance trade and enterprises abroad. It is sufficient to point out as clear evidence the official views of the Japanese Government asked to present views on the draft of the 'Unesco Recommendation on Education for International Understanding, Cooperation and Peace and Education Relating to Human Rights (1974)'.

The Japanese Government will now promote 'assistance' for bringing up men of talent which is related to the promotion of a large-scale economic and technical cooperation with other countries. It is not an international cooperation in economy and education to aim at the establishment of an internationally affirmed new international economic order, the right of the States to develop their economic and society independently and to promote the fair social progress of all human beings Despite all flowery words, the aim is the promotion of a "Marshall Plan made in Japan".

I think it necessary today to attach special importance of education for international solidarity in compliance with the tasks and principals to establish new international economic order. It should also be in accordance with the spirit and principles of the international solidarity movement of educational workers and all working people of the world. As was pointed out in the afore-mentioned Unesco Recommendation of 1974, the "Conclusion and Final Documents" of the World Conferenee for Disarmament and Education of 1980 and other documents, education for peace, disarmament, human rights and development should be promoted as one complex.

Conclusion

The essential task of the establishment of a desirable relationship between education and

economy and the establishment of a democratic education which promotes the unification of productive work and education, polytechnical education and full personality development cannot, as I stated already, be accomplished in a society ruled by capital. However, the task not only consists in the fulfilment of actual demands of the working people but also in the creation and development of democratic educational theories which have been evolved and historically affirmed With regard to the education of girls which is one of our major programmes, we think that it is not possible completely to eliminate discrimination based on sex in a society dominated by capital. However, the education of girls is an important task in creating the conditions for the unrestricted development of human personality.

We have been demanding that the Japanese Government should ratify the UN Convention on the Elimination of All Forms of Discrimination against Women. However, the Government has refused to do so because it has been reluctant to eliminate discrimination in the law on nationality, in employment opportunities and in the curriculum As regards the guarantee of full personality development, we have been making efforts for the promotion of voluntary research on the education of girls as well as for the improvement of curriculum.

It is a fact that the capitalist system of education has more than ever become the subject and area and severe class conflicts. The further development and improvement of education in the capitalist countries is a decisive and important task of educational workers and all working people who have been developing difficult and strenuous struggles for the democratization of education and the economy in highly educated but basically capital-dominated countries.

The Japan Teachers' Union has for long promoted the exchange of practical and theoretical studies and experiences by organizing 'workshops for junior trade union leaders' and 'educational research assemblies', both at local and national levels. I think it has recently become more and more important to recognize the significance of our struggles in Japan and to believe firmly in the success of the difficult struggles, though visible results are hardly attained under the domination of capital.

(Kazuko Hashiguchi in *Teachers of the World*, 3/82)

U.S. TV addiction hits danger mark

THE following are some statistics on television addiction in the U. S. population.

In 1963, average household use reached 5 hours, 50 minutes per day.

By 1976, average use was up to 6 hours, 49 minutes.

During February 1980, American homes had their TVs on an average of 7 hours 22 minutes and it is likely that official average use has now topped 8 hours a day. Unofficially it is even higher since the statistics count only one set per home, whereas almost 60 per cent of American homes have two or three sets, usually "for the kids"

In households where there are three or more children, the official statistics claim that the set is on minimally 9.25 hours daily. Although the two major rating services, A.C. Nielsen and Arbitron, have historically tried to mask the figures, it is clear that pre-school children (under five) watch television somewhere between 4.5 and 7.25 hours per day, that is, 38 to 60 per cent of such children's average 12 waking hours. Preschooler use is closely matched by figures for men and women over 60 years.

All told, this means that most Americans do almost nothing more than watch (or go to school, eat, sleep in front of a switched-on

TV and if the people who control the so-called entertainment industry have their way, most schooling in the future will be conducted in front of television set.

One television executive described the American population in the following manner: "We have a whole generation who have grown up reacting to commercials and television visuals. Add to that the tons of research done in the 1950s and 1960s and you understand why TV commercials have been so effective Child research is important because if you get them young, you keep them."

New Wave, 20 March 1983

Primary school achievement tests

A BATTERY of tests was developed under ERIC Grant in Aid Scheme for the seventh graders of Gujarat by J.H. Shah. The purpose of the battery is to estimate the developed ability of children. The title of the test is · Construction and standardization of primary school achievement tests for pupils of grade VII in the State of Gujarat. The test battery consists of (*i*) vocabulary, (*ii*) routine computation, (*iii*) sentence completion, and (*iv*) mathematical reasoning. It takes two class-periods for its administration. It yields V score, Q score and total score. Three try-outs were carried out on eighty, two hundred and three hundred and eighty nine pupils to refine and select the items for the final run from 265 items. The final form was administered to 2,089 pupils (1,300 boys and 789 girls) drawn from 52 schools of different regions of Gujarat State, by stratified cluster-sampling method. Stanine norms for V, Q and total scores were developed for three different groups: (*i*) urban (boys and girls), (*ii*) semi-urban and rural (boys only), and (*iii*) semi-urban and rural (girls only). The estimated reliability coefficients by different methods ranged from 0 83 to 0.87 (V score), 0.76 to 0.79 (Q score) and 0 89 to 0.94 (total score). The standard error of measurement varied from 3 to 5 points Intercorrelations of four tests were also computed and ranged from 0.44 to 0.69. Validity coefficients against the annual examination marks in Gujarati, mathematics and academic subjects only had the respective range from .29 to .68 (V score), from .30 to .75 (Q score) and from .42 to .75 (total score). Contingency coefficients against the teachers' rating were 0.57 (language teachers) and 0.61 (mathematics teachers). Validity coefficients with other allied psychological tests ranged from 0.59 to 0 77. All these coefficients were found to be statistically significant beyond 0.01 level of significance.

NEWS FROM FIELD UNITS

Patna

Improvement of Secondary Syllabus

A BROAD-BASED expert committee met at the instance of State Education Department at Netarhat in December 1982 to frame a new kind of syllabus for secondary classes based on the revised curriculum accepted by the government for implementation from 1984. This new curriculum has been devised to reduce the load of content and the number of papers in the Secondary School Examination at the end of Class X. The Education Department will very soon constitute committees for revision of books based on the new syllabus.

Seminar on Child Education and Child Welfare

A one-week seminar was organized jointly by Kishore Dal Central Headquarters, Bihar, Patna and Bihar State Crime Prevention Society. The seminar was attended by persons from various walks of life—social workers, sociologists, doctors, educationists, principals, teachers, etc. The seminar brought into focus problems of child education as it existed today as well as how the existing system of education prevalent in our institutions is incapable of solving them. The role of voluntary organizations in creating awareness among the parents for taking care of the child both at home and outside, keeping in mind the need and nature of the child was discussed. Problems of disabled and handicapped children, cause, and prevention of malnutrition, juvenile crime in India and how to minimize it, voluntary efforts in government sponsored scheme for child welfare, various aspects of social welfare, child welfare movement in India, philosophy of voluntary social work, problems of government grants, recreation and creative art for children and such other important topics were highlighted during the seminar.

Orientation Seminar on Toy Making for Teaching

This programme was conducted by Field Unit, Patna, in collaboration with inspectress of schools, Bihar in Women Primary Teacher Education College, Jasidih in the second week of December for three days. The participants were primary school lady teachers from various schools of Bihar joined by local primary school lady teachers as well as lady teacher-trainees of that institution. The programme brought in lot of good ideas on use of toys in teaching. It generated enough enthusiasm among the participants as was evident from the discussions and presentation of lessons.

A workshop on toy-making-cum-exhibition was also held on 20-22 February 1983 in Bankipur Girls' High School. A good number of toys received from pre-primary and primary schools of Bihar were also exhibited in the hall which was kept open to local teachers and students for two days. The exhibits were evaluated by three judges and prizes were awarded in cash according to NCERT norms by the inspectress of schools, Bihar. The first prize winner was instructed to attend the National workshop to be held in NCERT headquarters in March 1983. The judges recommended six consolation prizes instead of the usual four. The amount of consolation prize was equally distributed among the six winners.

Pune

Free Secondary Education in Maharashtra

STUDENTS in Maharashtra whose guardians are not income-tax payers will receive free secondary school education from the academic year 1983-84. This was announced by the Chief Minister of Maharashtra Shri Babasaheb Bhosale. The details of the scheme are being worked out and would be announced soon after they are finalized. The concession will cost the state exchequer Rs. 6 crores annually. Nearly 90 per cent of secondary students would benefit from the scheme. At present only students whose parents' annual income is below Rs. 4,800 are entitled to this concession.

Population Education Conference

The Population Education Cell of the SIE,

Pune organized a two-day conference of the Deputy Directors of Education and Education Officers of the Z.P.s of Maharashtra state on 3 and 4 January 1983. The conference was inaugurated by the Minister of Education and Social Welfare, MS, Shri. Balram Hire, on 3 January 1983. In his inaugural speech he brought out with statistics the magnitude of the problem of growing population in the country and asserted that unless something worthwhile and tangible is done to control it the country as a whole will have to face a number of difficulties that are intimately associated with rapid growth of population. He said that about 42.5 per cent of the population in the country is in the age-group of 0-14 years while population of those above 59 years is only 7.5 per cent. This means that about 50 per cent of the population depends for support upon the remaining 50 per cent of the population. The present population in the age-group 0-14 years will become responsible citizens of the country ten years hence and it is, therefore, necessary that programmes are organized for them in the fields of not only education but other fields of life also if the best out of them—body, mind and spirit—is to be drawn out. The average responsible citizen must be made to understand the significance of restricting the family size and should be exposed to ways of family life that would make him happy and contented. He appealed to the officers present on the occasion to turn the programme into a purposeful educational exercise so that the common man derives full benefits from it. The programme will be started from 10 January 1983 in 137 lower teacher training institutes of the state and these institutions in turn would train about 16,500 headmasters and primary teachers of senior primary schools. The Population Education Cell has prepared instructional material for the use of teacher education of the D. Ed. institutions in such a way that the 'content' on population education is integrated into various subject-matter areas in such a way that the important features of population education are brought home clearly and effectively. No separate book or material is proposed to be prepared on the population education theme as such.

State Science Exhibition at Solapur

The Eighth State Level Science Exhibition was held at Haribhai Devakaran Vidyalaya, Solapur from 1 to 5 January 1983. 249 students (including 40 girls and 32 teachers) participated in the exhibition. The exhibits based on the theme 'science and technology productivity', were displayed from all the 30 districts. Vignyan Kendra, Solapur displayed the recent techniques and the trends in science education programmes by installing a special stall Prizes and certificates were distributed to the winners. A special running trophy was awarded to the best exhibit from both the categories. Film shows, quiz competition and cultural programmes were organized in the evening every day.

State Awards for Teachers

The MS Government announced the name of 42 teachers of primary, secondary schools and of universities of Maharashtra for the State awards for the year 1982-83 It is expected that they will be felicitated and given State awards at a formal function on 5 September 1983, the Teachers' Day. The State award consists of a cash prize of Rs. 500 and a certificate of achievement. Of the 42 teachers, 17 are each of primary and secondary schools and 6 of universities and 2 special teachers.

Scholarships

The Union Government will award this

year merit-cum-means scholarships to students pursuing their studies in approved residential secondary schools. The students whose parental income does not exceed Rs. 500 per month are eligible for this benefit. The selection will be made on the basis of all India examination from amongst children in age-group of 11 to 12 years and recommended by the State Government on the basis of their performance in the preliminary test. The scholarships will be tenable for the duration of the secondary education. The scholarships include the tuition fees, residential charges, cost of books, besides pocket money and clothing allowance. Fifteen per cent of the scholarships will be reserved for scheduled caste and 5 per cent for scheduled tribes. Hundred scholarship will be awarded this year to students for developing talents in cultural fields such as traditional music, dance, drama, painting and sculpture. These scholarships, awarded under the Talent Search Scholarship Scheme of the Centre for Cultural Resources and Training, Delhi, are tenable for one year at the rate of Rs. 600 per annum to the candidate, undergoing specialized training in the school or town where he is already studying or residing and Rs. 1200 per year where the candidate is required to join institution at a place other than studying or residing for the purpose of specialized training. In addition, the Govt. of India will also bear the fee paid to teacher for specialized training. These scholarships will be awarded to the students in the age-group of 10-14 years studying either in recognized schools or belonging to families practising traditional music or other arts. The scholarship once given could be extended for more years till the completion of the first university degree stage of education up to the age of 20 years.

SCERT for Goa

The proposal of converting the State Institute of Education, Porvorim, into a State Council of Educational Research and Training (SCERT) has been forwarded to the government If it gets the green signal, it is expected that the institution will have more to do in the progress of education in this territory. According to the recent annual report of the State Institute of Education, about 95 per cent of the envisaged activities were carried out effectively such as seminars, training courses for teachers, etc. The institution has also acquired various audio-visual equipments for the purpose of educational projects.

Exemption from Examination Fees

The students from drought affected areas of Maharashtra will be exempted from paying fees for the annual secondary and higher secondary Board and University examinations which would be held during the months of March-April 1983. This was assured by the Chief Minister of MS recently He said this amount of examination fees will be paid to the Board and universities from the Chief Minister's funds.

No Books, Note-books up to Class IV

The government has taken a decision that only slates and pencils will be allowed to be used by the students of I to IV standard of primary schools of the State. No note-books will be permitted. This has been done with a view to avoid the 'weight' the small children are required to carry to the schools and to reduce unnecessary expenditure on note-books, etc. by the parents coming from economically backward population.

Workshop on Try-out of Instructional Materials and Pupil Evaluation

A national workshop on 'Try-out of instructional materials and pupil evaluation' under

the UNICEF project PECR was organized by the Primary Curriculum Development Cell, NCERT, New Delhi, for for the project coordinators and other members of the PECR project teams of the states/UTS at the SIE, Pune from 4 to 11 February 1983. The workshop was formally inaugurated by Mr. Daniel J. O'Dell, Programme Director. Education and Childhood Disability, UNICEF, New Delhi. In his maugural speech Mr. Daniel explained in his characteristic style the role of education in social change the intricacies of learning-teaching process, the real meaning of 'minimum learning continuum' and the skills to be developed in the children.

Subject-wise groups such as language, mathematics, SUPW, EVS and CA were formed. Each group through a good deal of discussion prepared a draft plan for pupil evaluation in the subject specifying in clear terms the mastery level in respect of the competencies identified under the 'minimum learning continuum'.Each group also suggested strategies, tools and techniques of pupil evaluation. The workshop made the following suggestions which were accepted :

1. Tools of evaluation may not be the same for all classes and all subjects.
2. Evaluation techniques could be introduced in the class in which the new curriculum is introduced.
3. Each TTI should adopt one project school while each member of the SPCDC team should also adopt a project school for closer observation of results.
4. Plan of action for activities, evaluation, teaching-learning process, etc. for 1983 could be prepared and a copy of the same be sent to PCDC, NCERT, New Delhi.

Andhra Pradesh

Module-writing Workshop

Dr. W. A. F. Hopper was deputed by the Council to conduct the module-writing workshop organized by the YMCA College of Physical Education, Madras. An attempt was made to prepare sample modular-type instructional material on selected areas of physical education for the target population of Class VIII learners in the sports wing of the Sports School in the college campus (about 65 acres). The participants were drawn from the college faculty, and school staff including four coaches were appointed by the Government of Tamil Nadu exclusively for providing training in football, hockey, athletics and swimming for the benefit of the boys in the 'sports wing'.

The participants were exposed to the following theoretical concepts (adequately illustrated with reference to tennis and cricket) :

1. Principles of learning and teaching relevant to modular instruction
2. Developing instructional modules
3. Instructional modules and modular courses of study
4. Psychomotor domain taxonomy of educational objectives developed by Elizabeth Simpson.
5. Specific outcomes of learning.
6. Try-out of modules.

The following strategy was operated to develop a capsule on 'push-pass' with reference to the game, football.

1. The football coach took a lesson on 'push-pass' to a group of 8 learners from class VII. (They were never exposed to this skill in any structured learning situation earlier.)
2. The participants observed the lesson

with reference to SOLs and teaching-learning strategies as disussed by Dr. W.A F. Hopper.

3. The lesson was discussed and an analysis was made with reference to the 'hierarchy of process skills' leading to the expected terminal complex skill.
4. A capsule was written by the whole group working together using the format discussed earlier by Dr. Hopper It was interesting to record that a new format emerged out as a result of discussion relevant for learning psychomotor skills.
5. The capsule on push-pass was tried out in the field with a set of new learners.
6. The draft capsule was modified in the light of the try-out and a trial capsule was developed.

There were specialists in the area of Yogasana and other games. Each one of them made an attempt to write a sub-modular unit for a learner-engaged time of about 40 minutes. There was no time to even discuss the material. The workshop provoked the participants to think divergently for developing modular-type instructional material for the children selected and sponsored by the Government of Tamil Nadu in the sports schools.

Chandigarh

Books on National Integration, Cultural Heritage and Moral Values

THE Punjab School Education Board has published six supplementary readers for the students of high and higher secondary classes. These books published in English, Hindi, Punjabi were released at a function in Chandigarh on 22 January 1983. The books have national integration, cultural heritage and moral values as their themes The books are *Sade Desh Bhagat, Let us Build Ourselves, Hum Ek Hain, Roop Mahik, Sacha Jhooth,* and *Maharaja Ranjit Singh.* The authors include Bhai Vir Singh, Gurbaksh Singh, Preetlari, Sant Singh Sekhon, S S. Amol, V.N. Tewari, Maithilisharan Gupt, Harvans Rai Bachchan, Dinkar Dinesh, J.S. Grewal, Fauja Singh, Khalid Hussain, Narinder Pal Singh, Pritam Singh, Man Mohan Singh, J. S Mani and R. L. Ahuja.

World School Childern Art Exhibition—1982

Five students in the age-group 6-12 of Yadvindra Public School, Patiala (Punjab) have been awarded 2 silver and 3 bronze medals besides 53 commendation certificates for the vivid and creative paintings contributed by them to the World School Children Art Exhibition, 1982 under the aegies of Korea Children Centre, Seour in South Korea.

Meeting on Population Education Programme

A meeting of all DEOs (secondary and primary) and principals of teachers training institute was held at SISE, Punjab in connection with population education programme in the state. The meeting also discussed about NTS examinations, inservice teacher training, science exhibition and proper utilization of science kits. □

Book Reviews

Educational Concepts of Guru Nanak in Japji Sahib

T. S SODHI AND KAMALJEET KAUR, Mukand Publication, Ludhiana, 1980, pp. 40. Price : Rs. 5.00

'JAPJI SAHIB' expresses the quintessence of the philosophy of the Sikh Gurus, and more so, their educational philosophy. It is an intensely religious work created by Nanak's genius after an intensive study of human nature. It is this work that determines the very genesis of the entire philosophy of the Gurus, and as such, Nanak, in order to make it to be so, produced it as his first great work soon after the revelation: *Na Ko Hindu Na Musalman.* That being so, there is hardly any aspect of philosophy on education as perceived by the Gurus that does not find its seeds in this work, *Japji Sahib.* Viewed from this perspective, the book under review fails to bring out the inherent spirit of Japji which offers, indeed, a complete philosophy for the true education of 'man'. In this context, Prof. Talib's observation in the foreword of this book that "In Gurbani as a whole and in Japji, education as such does not figure as an important pursuit of man" is indeed questionable especially against the background of Gurubani, and particularly of the Japji Sahib.

The Gurus repeatedly warn man about his 'Sin of Acedia' in their words like *Passu maanas cham platey, laahe kaaran aaya jag mein, hai majoor bhaya thhagaat thag,* etc. Man roams in the world as an animal clothed in human skin He defies the merit of his being 'man' and is deceived by the coolie in him in every way In other words, he is lost too much with the world without ever thinking of his original purpose or promise. It is indeed this central thesis that reverberates in the length and breadth of Japji, as in the whole gamut of the Guru's Bani, and is, therefore, very vital in their educational philosophy. Japji, indeed, is fundamentally addressed to this great task, and reveals how man could rise above his animal level of existence.

The hallmark of this philosophy is contained, among others, in the 'Khand Theory' propounded by Nanak in Japji, which divides the whole process of man's life into five segments, each of which must get along consistently and concurrently in order to make his life pure. This world is truly a 'Dharam Khand', a holy place for a holy life, where man must

not only understand his primal duty but must also perform it conscientiously deeming it to be a divinely ordained one. He must also understand the domain of 'law and science' so as to make science, technology, knowledge of the world, etc. instrumental to the realization of the true, good and beautiful lest it should remain what the Gurus term as 'chunch gyan', merely a beak-level knowledge. So should 'Gyan Khand', the world of Reflection, Idea, Form, Philosophy, etc. not dwell in isolation lest it should be equally termed as 'chunch-gyan'. Therefore, what the Gurus seek is a wholesome integration of these into 'Sram Khand', the domain of constructive creativity where the highest creative and constructive genius of man must find its finest expression through arts, crafts, aesthetics, vocation, etc. in the true image of the creator and in perfect harmony with the true, good and beautiful. In other words, the study of a subject, the choice of a vocation or profession and, indeed, the whole way and view of life must be guided, determined and directed towards the realization of the 'prophethood' of man or his 'godliness'. True education must yield a 'vision' of greatness that renders perfect unison between what Nanak calls '20' and '21', that is, between the world of matter and the world of spirit and between humanity and divinity.

In this matter, the book under review tends to trace the process of education via spiritual development to emotional and to intellectual development which is, indeed, much short of what the Gurus expected the process of education to be.

As to the format, the book is not divided into different chapters, though it overtly deals with different aspects of education like educational philosophy of Guru Nanak (defined as idealism in education), educational philosophy of Guru Nanak in Japji (faith in Him as a process of education), aims (with emphasis upon spiritual union with God); content (which is the Lord in manifest and unmanifest forms), teacher (which is God Himself and communion with Him makes the strength of the teacher), method of teaching (in the forms of demonstration and motivation), besides enumerating certain philosophical areas in general including the importance of 'individual ethics'. On the whole, the book under review seems to be a simple synopsis or an outline for a further research work. It is, however, suggestive of the scope and depths to which the educational philosophy of the Gurus could be taken up.

D. N. KHOSLA

Handbook of Special Education

KAUFFMAN AND HALLAHAN. Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632, 1981, pp. 807. Price : Not mentioned.

TO EDUCATE all citizens is the responsibility of every country. Illiteracy is a serious problem of the Third World. There is little doubt about the need for education. Constitutionally also education is the fundamental right of every Indian. Educating children at all stages is a common problem of all countries. There are individual differences among children in a classroom, whereas a few are normal and others have personal problems.

The problem-centred child may be handicapped or not handicapped. There are various types of handicaps at each stage in the regular classroom, such as physical handicap, psychological handicap, social handicap and economic handicap, etc. Therefore, they are not well adjusted in their classes in particular and the society in general.

Specific learning disability is a new concept. Incidentally, this term has affected the teachers. On the other hand, there are gifted children in the classroom. Handling the gifted child may become a delinquent easily for lack of proper assignment. Through investigations specialists have suggested to provide special education to those who need it.

Besides the usual special education categories or areas of disability or giftedness, there is the consideration of age range from birth to adulthood, curriculum running the whole gamut from infant stimulation to vocational and career education, teaching strategies that are as different as humanistic and behavioural psychology, and a vast array of related services. This book provides a thorough coverage of all these areas. The extensive coverage provided in this handbook, and its logical, well-organized format, make it the most comprehensive, uptodate reference book available in the field of special education today. The field of special education reached long ago the point where a single source of authoritative information is needed.

The book is divided into five parts. Each part contains a systematic study and answers various questions which are involved in this reference. With this in mind, the editors of the book, James Kauffman and Daniel, gathered together original collection of writings in all areas of special education, contributed by 49 experts. Each chapter starts with a suitable theme and design. Many valuable book references are given at the end of each chapter. The book is written, systematically, in detail and simple language has been used. Emphasizing the individual differences among the school-going children, the book discusses each category of such children. It is the conclusion of experienced and hard-working contributors to this book.

It is a useful publication for those working in the field of exceptional children.

R.K. SHARMA

Development and Planning of Modern Education

J. C. AGGARWAL Vikas, 1982, pp. 424. Price : Rs. 95.

THE book under review is an ambitious attempt of wide coverage by the author who tries to treat the subject of education, its development and planning in India with a cautious outlook on its merits and demerits. In 32 chapters of the book the author discusses constitutional status, role of state, structure, organization and problems of education at different levels and types Ambitious planning of presenting all under one canvas of education, somehow has given slippage to coherence and relevance in the process of treatment of the subject. The reports of the commission and committees—Secondary Education Commission (1952-53), Kothari Commission (1964-66), Ishwar Bhai Patel Review Committee, Adiseshiah Report on plus 2, National Review Committee (Chapters 9, 10, 11, 12 and 13) have been dealt with separately. It would have been better if reports of these commissions and committees could have been discussed in context of the problem. It seems the author has been more conscious in presenting the salient features and recommendations of these documents and less to their context. Though the author develops more than two or three pages on recent development in Teacher Education Programmes in India (pp. 271-273), yet there is no reference of the document *Teacher Education Curriculum—A Framework*, developed

by the National Council of Teacher Education. The role and reference of the National Council of Teacher Education which is an apex body for teacher education programmes in India is also omitted.

While discussing inservice teacher education in Chapter 21, the author abruptly introduces at the end a Table 21.1 (at page 277) stating number of secondary teacher education institutions in India (1981) as a corollary to the chapter but nothing is stated how this table reflects the context in question. Likewise, the author could have presented the status and position of unqualified teachers in different states at school stage which is a basic problem of inservice teacher education

In Chapter 22, 'Teacher status and service conditions,' the author has given the recommended scale of pay for various categories and levels of teachers by the Kothari Commission. He could have chosen to enlighten the reader by giving a comparative position of scales of pay as given by the states/UTs governments at present and the recommended one so that disparities or non-implementation of recommendations could be ascertained. While treating higher education and research in Chapter 18, the reader does not find anything about the research programme. Surprisingly, technical and professional education has been left unattempted. Since the book is concerned about the planning and development of modern education, readers do not find anything with respect to investment on education under various plans, human resource development and manpower needs of the country which is basic for any planning and development in education. Moreover, the treatment of the subject has been more on a layman approach rather analytical that is why we find lapses of statistical evidence in the book Table 23.1 (page 298) and statement on page 300 (literacy in India) is incidentally a repetition of the same table. Typographical errors have also crept in. In spite of these lapses, the book is a useful and handy reference It makes up long-felt need on the subject. The book qualifies for a textbook as well as a reference monograph which will provide omnibus service.

V.P. GARG □

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